ABORIGINAL SF

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STAFF

EDITOR: Charles C. Ryan
PUBLISHER: A crazy alien

ASSISTANT EDITORS
Daniel D. Kennedy
Floyd Kemske
Mary C. Ryan
Laurel Lucas
Steven Popkes
Kathy Romer

ADVERTISING
Kathy Romer
Joanne Coughlin

GOFERS
Charles E. Ryan
Thomas S. Ryan

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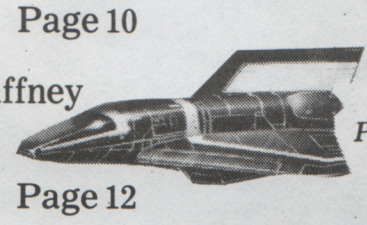

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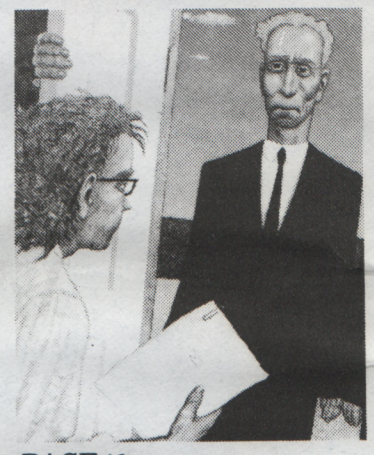

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ABOUT OUR COVER

Once we knew the nature of our new magazine, we looked around for an artist to portray that concept for our first cover. We chose Cortney Skinner, who likes to dress up on occasion. By no small coincidence, Cortney chose his agent, Gin O'Leary, to pose as his model for the young lady riding the space bike. Gin, who likes riding horses and fencing when she's not agenting, would probably be right at home on the real thing. For those who haven't figured it out, the cover depicts the science fiction collected by our alien publisher as it is beamed back to its home system. For more on that see the publisher's note on page 3.

A Report from Our Alien Publisher

INTRODUCTION AND STATUS

Please forgive me for what will seem an inordinate delay in the filing of my first report, not to mention this unwelcome interruption in J. R. Ewing's remarks to Sue Ellen. Our communication system has failed, and I am forced to file this report in the form of a decisecond burst which appears to most viewers as an interlude in which J. R. clears his throat. I chose this one as the broadcast most likely to receive intense scrutiny in your studies of Earth radio signals. It is monitored quite closely by most human beings, so I assume you would devote commensurate study to it.

I suppose some explanation is in order. Not having heard from me for more than 24 years, you must have assumed I was dead. I assure you, however, that I am alive and filing this report, as agreed, during the first Earth year of my arrival. Unfortunately, interactive communication is out of the question. The vent is permanently closed to me, since my diode was damaged shortly after my arrival in a place called Des Moines. It appears to still transmit, but there is no response. It was crushed by a native. Mashed in the street where I had dropped it by the creature's 195/60R15 steel-belted radial appendage. I see now that it was unwise to have attempted conversation with a 5.0 liter V8, but my pre-transition briefings had made no reference to this creature's obvious insensitivity.

In fact, there is a lot of information that did not get into the pre-transition briefings. It was only later, after the encounter, that I learned the meaning of the expression "nut", by which the 5.0 liter V8 addressed me just before crushing the diode, when it instructed me to leave the roadway. I first supposed it was a respectful form of address, since it was accompanied by the smell of burning polymers. It is not a term of respect, although knowing its actual definition, I cannot understand how it has acquired an abusive connotation. You can see for yourself, however, in the report appendix labeled "Slang Dictionary."

Other than my run-in with the 5.0 liter, there was nothing untoward in my arrival. The rephasing reaction, I learned later, created a system-wide energy imbalance, but the only sign of it was the dimming of something called "Comet Halley" which appears periodically to the Earth creatures. You needn't worry over their suspicions, however. Few of the creatures here now were alive when this comet last appeared, and therefore hardly any of them know what it is supposed to look like. Among the human beings, there were reports and legends handed down by those who had seen it during its last appearance, but most people assume their ancestors were exaggerating.

Report on Creatures of Full Consciousness

This first report, then, will describe all the Earth creatures that have attained full consciousness. Unfortunately, there aren't any.

The Human Beings

There are many sapient forms on this planet, the foremost being (as we had suspected from the television broadcasts) the human beings. (Incidentally, our second most likely candidates for consciousness, the Muppets, have been a disappointment as well.) The human beings have actually attained a certain level of self-awareness. But as you know, consciousness consists both of self-awareness and awareness of others. By the latter measure, human beings emote no more deeply than the non-sapient 5.0 liter V8 that crushed the diode in Des Moines.

I think the disabled emotionality of human beings is a result of the fact that they have not yet discovered the spectrum of sentience. I know you would be no more surprised if I told you they hadn't yet made a connection between sexual activity and reproduction. But it is true. They lack the vaguest notion of the sentience that invests all matter from the smallest molecule to the largest galaxy. They actually believe that the stars behave the way they do as a result of something called "nature" rather than by choice. How do they explain binaries, novae, pulsars, and singularities, you say? Don't even ask.

Human Fiction

Among the 100 appendices attached to this report are several specimens of "fiction," which were prepared by human beings. They are included to give you an insight into the minds of creatures who actually manage to function in their environment without any awareness of the sentience spectrum. These "fictions" are like the television shows we are so used to from our monitoring of Earth radio signals, except that they are in the form of print. This print gives the viewer an opportunity to decode them and enhance them with personal imagination. It is a clever way to increase the interactivity of the story-viewing experience, and I am sure print will eventually grow to be a medium of great importance in Earth communications, perhaps surpassing television one day. We should consider developing a version of the technique.

When you review the appendix items, you will see that some of the human beings come closer to seeing the sentience spectrum than others. Note, in particular, the items titled *The Veda* and *The Old Man and the Sea*. By and large, however, human beings believe that sentience is a limited commodity (some of them even refer to it as a gift), and the most thoughtless of them believe it is not shared by any creatures outside of humanity! There is also even a small minority made up of two groups, one called "psychotics" and the other called "behaviorists," who seem to think that consciousness is limited to themselves. But the rest

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Why Aboriginal SF?

By Charles C. Ryan
Editor

Why have we called our new magazine *Aboriginal SF*? After all, "aboriginal" means native or indigenous. It can also mean first or original, or pertaining to aborigines. And in some circles it has come to mean primitive or backward. So why *Aboriginal SF*?.

Part of the answer can be read above — the essay by our alien publisher.

Yup. Alien: as in first contact; as in an extraterrestrial, a visitor from another planet in a solar system 18 light years from Earth; as in BEM (bug-eyed monster). Alien.

We know that may be hard to swallow. It was for us, at first. And it was for the Pentagon. We went to them when we stumbled on the alien's signal in one of those serendipitous, looking-for-something-else accidents that make scientific research so much fun. But the Pentagon thought we were nuts and referred us to a UFO society. Even the UFOites didn't believe us. The scientists at SETI (Search for Extraterrestrial Intelligence) just laughed and told us we should write science fiction. (What the heck, Carl Sagan did.)

So, here we are.

One reason no one believed us is that the alien's signal is traveling in the wrong direction. We weren't scanning the heavens for astronomical events, or looking for a new star to name after ourselves. We weren't looking for a signal at all, which, we suppose, is how we found it. As best as we can tell from our sketchy translation of its language, our alien is some sort of cultural anthropologist and it is beaming selections of Earth's culture back to its home system (more about that later). And it seems to have developed a fondness for science fiction, which comprises much of the literature it has decided to collect.

We theorize that the alien has found a way of tapping into our communications systems and, even more importantly, into our computers — all of them. How? Ask any computer buff. Computers emit radio signals. Computers sold to the government which might be used on classified material have to meet a "tempest" rating so no signals will leak. Commercial computers have to be shielded to meet FCC (Federal Communications Commission) regulations to prevent them from interfering with radio and television signals. Apparently that shielding isn't good enough. We say that because, in addition to much

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Aborigines/

By Laurel Lucas

The writers and artists who contribute to the pages of this magazine function unusually well in the world of the imagination. But in this column, I'll be telling you a little something about their real world lives. I'll also be talking regularly to other sf artisans to report on the latest events in their lives. (Thank goodness they're such an interesting lot and they like to talk, it makes my job easier.)

In this issue:

Award-winning author Orson Scott Card brings us "Prior Restraint," a short story about a literary malady infinitely worse than writer's block.

Card's novel *Ender's Game* won the Nebula Award in 1985 and was followed by the sequel, *Speaker for the Dead* in 1986.

Card, winner of the Campbell award for best new writer of the year in 1978, wrote plays and musicals for regional theatre before he began writing fiction. He is currently working on a series of fantasy novels set in an alternate America in the early 19th century, an America where the King of England lives in Virginia, Ben Franklin was a wizard, and George Washington was executed for treason.

Harry C. Stubbs, a.k.a. Hal Clement is the renowned author of such sf classics as *Needle* and *Mission of Gravity*.

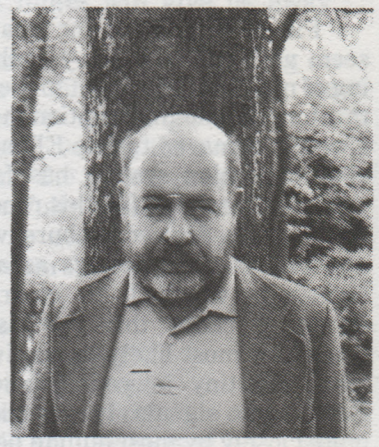
Photo by Bradford F. Herzog

Hal Clement

Clement is noted for the detailed and realistic worlds he creates for his characters. He has lent this skill to *Aboriginal SF* by designing a solar system, "The Home System," for the express use of our authors and the enjoyment of our readers.

John Alfred Taylor has wasted no time in populating one satellite of "The Home System" with glorious, soaring creatures in his short story, "The Phoenix Riddle."

Taylor writes poetry, science fiction and horror when he isn't teaching at Washington & Jefferson College in Pennsylvania. His latest works have appeared in *Twilight Zone Magazine* and will be reprinted in the forthcoming *Year's Best Horror Stories*.



John A. Taylor

An all-too-human human-robot relationship is

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Alien Publisher

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of humanity recognizes the risk in this viewpoint and has taken steps to render these individuals less dangerous by either locking them up or giving them university appointments.

Human Cosmology

You will understand the appendix items much better if you know that this quaint notion of sentience being a human gift has been a major theme of their cosmology. Among the many separate cultures that inhabit this planet, the rule is for the members of any tribe to consider themselves "people" and outsiders as "others." This belief is predominant in the small and weak groups among them (whom the rest call "primitives" or "aborigines") where it does little harm. But it takes hold among stronger groups periodically, with devastating effects. The last major such sickness took place in a region called "Germany" just about 50 Earth years ago (see the appendix item entitled *The Rise and Fall of the Third Reich),* but another plague with more mystical overtones seems to be incubating in a place called the "Middle East."

Even those who acknowledge the sentience of other human beings cannot stretch their imaginations to acknowledge the sentience of all matter. Any time a group of human being sets up a settlement some place, the group members create stories which depict that place as the center of the Earth. This notion reached its ultimate expression about four hundred years ago, when the educated among them generalized the belief to the principle that the Earth was the center of the cosmos. See the appendix item titled the *Almagest*. It was symbolic of their basic belief that human beings were the very purpose of the universe, a belief they still adhere to, despite their vaunted efforts at communication with extraterrestrial intelligence and a small movement dedicated to securing the rights of animals.

I advise you to review the appendix items carefully. A better understanding of human beings will be necessary for you to benefit from my subsequent reports. Each of these reports will include additional appendices, especially more fictions.

Investigator's Situation

I have located myself in a place called Memphis, Tennessee. It is unbearably frigid, but at least it is humid, which helps to hold what little heat there is. I know I would find a tropical location much more conducive to good health, but I can study most efficiently among the human group called Americans. And I can study Americans most efficiently in this Memphis place.

I have become very partial to a speculative type of work called science fiction. Some of this speculative material almost shows an awareness, sometimes, of the sentience spectrum and therefore gives me hope for human beings.

This hope is something that sustains me. You will see among the appendix items a work called *Robinson Crusoe*. It is a book, written by an English human being over 200 Earth years ago, which describes a man who endured prolonged isolation with only a herd of goats and a servant for companionship. It comes reasonably close to conveying how I feel on this planet with the space vent closed and all hope of a return to Aris lost. The difference between me and Crusoe, of course, is that I have no servant. Often I have no hope, either.

My next burst will be placed on "The Tonight Show," disguised as the momentary mental lapse of a guest who wrote a book on memory improvement. It is entirely too human, I know, but I think the man is a fraud and could not resist the temptation.

Why Aboriginal?

(Continued from PAGE 3)

published literature, we discovered a great deal of unpublished work in the alien's signal. Including all of the short stories in this issue (except one). Our alien is tapping into the computers used by writers for word processing and is stealing their material.

With all that data sitting in our hands we decided to capitalize on it and this magazine is the result. Unlike the alien, who is an outright plagiarist and thief, we contacted the authors of the stories in this issue and paid them.

We haven't the faintest idea of what our publisher looks like, either in its alien form or in the human guise it has adopted. The alien broadcasts its signal on a monthly basis, and as soon as we can arrange it, we will bring you the translations at the same interval. But for technical reasons our translations will have to remain bimonthly for a few issues.

Now that you've read the Publisher's Note, you have an idea why we chose our name. To it, we are aboriginals — all of us on Earth. It makes sense. As dumb as the alien appears to be about some things (when was the last time *you* tried to talk to a 1986 5.0 liter V-8 Ford Mustang?), it has that edge. Any creature capable of crossing interstellar distances would have to consider Earthlings aborigines and somewhat backward and primitive by comparison.

Don't let it get you down, though. It was bound to happen sooner or later. And there is power in a name. Read a little about the aborigines of Australia. They have power. The power to commune with nature. The power of dream time. The real secret of power is to take something perceived as a weakness and turn it into a strength. And after all, isn't that what science fiction is? Our dream time. Our chance to explore "What if?" to the fullest?

An aborigine doesn't lack intelligence, only knowledge and experience. In many ways they are more capable in their own environment than the supposedly civilized whites who dubbed them aborigines in the first place. It's unlikely any of us, for instance, could survive in the Australian outback with nothing but a loincloth. Even though we are the last ones to be apologists for the human race (we have our own list of shortcomings), this alien comes off a bit high and mighty commenting on our sentience level. It is selling us short. In a sense it is doing what some of the less thoughtful of us do when we assume the handicapped in our society live less than full lives because of an impaired sense of sight or hearing. No way. Any lack can be compensated for, any handicap overcome. That's the way we are when we are at our best.

We, for instance, have figured out where our publisher's home planet is — in a binary, or double-star, system known as Eta Cass in the constellation Cassiopeia, or 19 Cass. Once we knew that much, we turned to Hal Clement to help us imagine what the Eta Cass system might be like (it's too far to discern by radio telescope). We call it *The Home System* for obvious reasons. Then we decided to turn the tables a bit and have invited science-fiction writers to speculate a bit about our crazy alien publisher's home system and what life it might hold. Maybe, if we are stubborn enough, we can make this a two-way conversation. We suggest you read *The Home System* to learn a little more about our publisher's physical background and then read John A. Taylor's *The Phoenix Riddle,* our first human-authored story set in *The Home System*. His phoenixes are a delight.

So there you have it. Now you know why we have called this *Aboriginal SF* and you know why we asked Hal (who is a genius at these things) to create *The Home System*. We haven't told everything, of course. More will be revealed in future issues, including a fictionalized account of how we stumbled onto the alien's signal.

One of the first things we are going to have to do is give our alien publisher a name — its own is unpronounceable and untranslatable. Maybe you could suggest one. Maybe we could make it a contest. How about the one who comes up with the best name (in our opinion) wins a lifetime (ours or yours) subscription to *Aboriginal SF*? Mail your suggestions to: *Aboriginal SF,* P.O. Box 2449, Woburn, MA 01888-0849. Only you have to use your own stamp and envelope to enter. You'll be disqualified if you use the postage-paid envelope in this issue — that's only intended for those who are subscribing. Of course you could do both: subscribe and then insert your suggestion. Which, needless to say, you should do — right away. You don't want to miss a future issue. Our crazy alien publisher has stolen some great stories.

Now that you have an idea of what we're about, please relax and enjoy the rest of the issue.

Books/ By Darrell Schweitzer

By Way of Introduction:

Greetings to the readers of *Aboriginal SF*. I would like to explain two things before beginning this column.

First, the purpose of the column: The basis of any good book review, as I see it, is to answer three questions — What is the author trying to do? Did he/she succeed? Was it worth doing? This is how a book review column differs from a shopping list. It is easy enough to run down a series of titles and say "Buy this one" and "That one stinks," but I, as a reader, have always found that a trifle unsatisfying. If the Three Questions are answered, then the buy/don't buy recommendation should be clear enough, and you will, I hope, have been entertained and informed in the process. So, I shall attempt some depth. Discussion is the better part of valor.

Second, Our Noble Editor has asked me to come up with a rating system for this column. Rockets are out. Nebulas are being awarded elsewhere. The final surviving jugs of xeno vanished into the Great Space Vortex of Argh, along with Sergeant Saturn and his peelot crew, circa 1947, and good riddance.

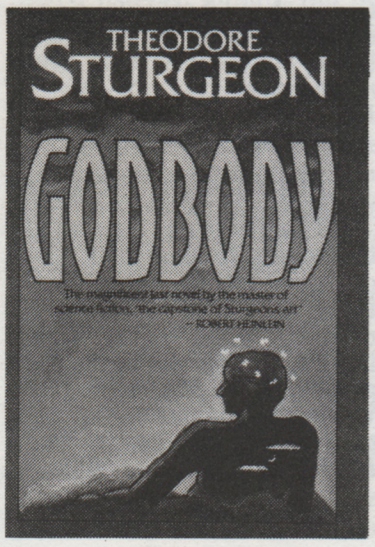
Stars are acceptable but trite. But I confess that I haven't come up with anything else that doesn't seem unbearably cute. What to do with a cliche? Why, blow it up, of course!

At least some of the time anyway. I shall rate books on a star system, five being the highest rating, one the lowest. But there are always exceptions. So, a *supernova* designation for the very best books, and a *black hole* for the worst. I have a sinking feeling that there may be more black holes out there than supernovae, but I can always hope.

Godbody by Theodore Sturgeon
Donald J. Fine, 1986
159 pp., $14.95

Godbody was Ted Sturgeon's *Silmarillion,* that much rumored, tantalizing work on which he had been puttering for years. A friend of mine once asked him, "When's *Godbody* going to be published?" and Sturgeon merely replied, "Yes."

It had a publisher once before, in the 1960s — the legendary Essex House, an attempt at something on the order of Grove Press or Olympia Press: *erotica,* rather than pornography, of high literary quality. The best-known Essex House title was Philip Jose Farmer's *Image of the Beast,* and Hank Stine's *Season of the Witch* also retains a certain reputation, but Essex House, alas, rapidly succumbed to the realities of the marketplace. The books were distributed in the "Adults Only" sections of sleazy bookstores. Regular readers couldn't find them. Porno readers found this literary stuff between the orgasms distracting. Essex House didn't survive long enough to publish *Godbody*.



After that, I suspect, the book was left an orphan. Sturgeon was allegedly rewriting it for years, but the sad fact is that *Godbody* could not have been published any other way except as the memorial volume of a major writer. It cuts across too many category lines and violates too many taboos. Brilliant as it may be, as luminous as Sturgeon's reputation may have been, *Godbody* must have seemed unpublishably daring.

What we have here is nothing less than a beautifully sincere and reverent X-rated religious novel, a literal gospel of sexuality. It's fantasy of a sort, but hardly what is usually published in anyone's Fantasy line. If that isn't enough, the very form of it is experimental. As both Heinlein in his introduction and Stephen Donaldson in his afterword note, *Godbody* lacks most of the apparatus of the standard novel. There *is* a story, mind you, in the sense of a logical progression of events, but it is told through a series of interlocking character sketches, all in the first person. The premise is very simple. A divine visitant to a small town affects the lives of various people. We see this through their differing perspectives, often with the same scene played over from a different viewpoint. By the time the visitant is killed, just about everyone has been irreparably changed.

How amazing this would have been in the porno racks! There is graphic sex in it, certainly, and even a scene or two which might conceivably be called arousing, but the book as a whole is *about* sex, which is another matter entirely. Further, it is utterly subversive to the idea of pornography. The message is that sex is clean and wholesome, nothing to be ashamedly hidden in a plain brown wrapper.

Godbody, the mysterious, divine stranger, is a sexual messiah who teaches love through the body, through self-understanding and the awareness of others. He always appears naked and radiates sensuality, and his sensuality has the power to heal souls. All of the characters have some sort of sexual problem, or represent some aspect of sexuality, and are more fully realized in the presence of Godbody. There is a clergyman who does not understand life; a rapist who cannot *give,* only take brutally; his victim, who lacks any sense of self-worth; a vulgar policeman who needs enlightenment; a banker who sees people as objects; and so on.

The chapters devoted to each of these are vivid portrayals of people who need to direct their love, or don't know how to love, or, worst of all, destroy love. The rapist is seen as sick and sad, and the real villain of the piece is a dried-up old biddy of a gossip columnist who hates anyone who might possibly have a more fulfilling life than her own. She uses innuendo, slander, and outright blackmail to stifle other people's lives. When she controls her poor secretary with the threat of revealing the story of the rape (so that people will shun the victim as a "bad girl" who "really wanted it"), this is depicted as intensely obscene. But sexual love, says Sturgeon, can only be beautiful. More than that, it is holy, a means of sharing an ecstatic union with God. (Indeed, Sturgeon once told me, when I was with him at a Clarion Workshop back in 1973, that the idea of *Godbody* was to get sex back into religion, from which it was unfortunately separated some two millennia ago.)

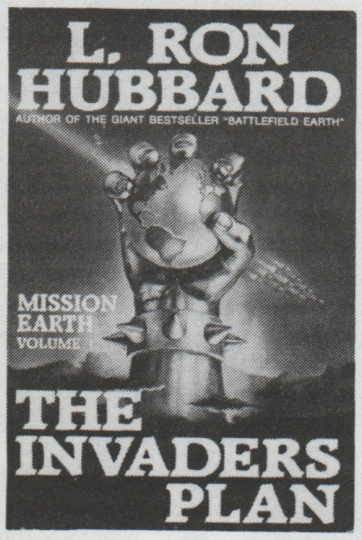
The parallels to the life of Christ come thick and fast toward the end. The gossip columnist plays the role of the Pharisees, and sure enough, she is the one who shoots Godbody.

But he rises again on the third day. He departs, but may return, as he has, apparently, many times before, in many guises.

Godbody is an intensely serious work, and I think that, all market considerations aside, the reason it could not be published until Sturgeon's death was that he never could be sure that he had said everything he intended to say *perfectly*. I think it mattered to him that much. Heinlein calls it the capstone of Sturgeon's art, and I can only agree. *Godbody* contains some of Ted's very best writing. The multiple-viewpoint narration is a virtuoso performance, entering into the minds of such a variety of people without ever striking a false note. The story is alternately tender and repellent, as it needs to be. It is a contrast of beautiful minds and ugly ones. Sturgeon, who spent his entire career writing about love, was one of the beautiful ones, and *Godbody* is his final testament.

Go and read it. As Stephen King says on the back of the jacket, "You will do more than enjoy; you will be increased."

Rating: Supernova. A veritable starburst.



The Invaders Plan
By L. Ron Hubbard
Bridge Publications, 1985
556 pp., $18.95

Let's face it: all recent hype aside, L. Ron Hubbard was simply not a respected figure in the field. True, he was an important writer in the '40s, a peer of Heinlein and Asimov, but the '40s were a long time ago, and Hubbard did nothing to increase his reputation thereafter. When he returned to science fiction with *Battlefield Earth* and built an enormous publicity machine to promote it, he was like the opera singer who rented Carnegie Hall. A huge outpouring of money will attract attention, but it won't make the performance any good. Sooner or later people notice.

The Invaders Plan, bluntly, shows no advancement over the work Hubbard was doing forty years ago. Worse, it is a serious retrogression. The prose is at the lowest pulp level, the characterization and plotting ridiculous, the overall impression left on the reader one of total vacuity. Worse, the book is the first huge volume of what is supposed to be a ten-volume *satire*. If the sheer size isn't enough of an overkill to put even the most steadfast reader to sleep, the satirical elements are, like the writing itself, on the lowest possible level, the caricatures not at all true to life, the alleged humor elephantine. Imagine Ron Goulart on autopilot, or an unbelievably terrible, rejected draft of one of Laumer's Retief novels, and you might get the idea.

The author of *Slaves of Sleep* and *Final Blackout* would have been ashamed.

Rating: Black Hole.

Tales of the Quintana Roo
by James Tiptree Jr.
Arkham House, 1986
Unpaginated, $11.95

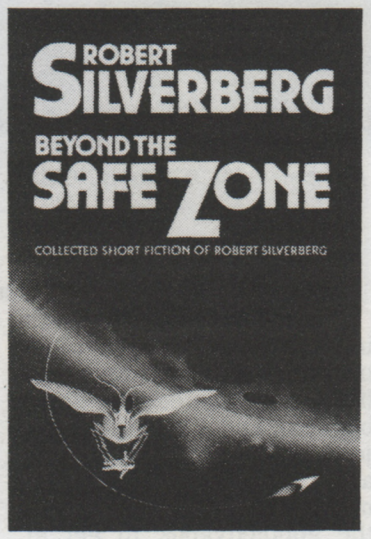
The Quintana Roo, the author tells us, is a wild district on the easternmost shore of the Yucatan Peninsula, "officially but not psychologically part of Mexico." It is Maya country, and filled with its own strange legendry.

The three stories which make up this slim volume are among the few Tiptree fantasies. They have appeared previously in *Isaac Asimov's* and *Fantasy and Science Fiction*. All of them are very long on atmosphere and local color, and sometimes a little slow on plot development. They are an odd mixture of past- and present-day elements, one involving a monstrous Thing formed out of pollution and debris on the ocean floor, and another a boy who waterskies into the harbor of a long-vanished city. All are beautifully written and form a unique contribution to the field. Tiptree has been somewhere we have not, and has reported back admirably.

Rating: ☆☆☆☆☆

Beyond the Safe Zone
by Robert Silverberg
Donald J. Fine, 1986
472 pp., $18.95

This massive reprint volume includes the entire contents of the previous Silverberg collections



Capricorn Games, Unfamiliar Territory, and *The Feast of St. Dionysus,* plus a few other stories. The title refers to the period in which the stories were written, the 1960s, when there was no "safe zone" left in the world, and all our values were being challenged. I think it also refers to a phase in his career, because he was less cautious in those days. These are his very best stories, and will startle readers who are expecting more of the gorgeous but unchallenging romance of *Lord Valentine's Castle*.

Rating: ☆☆☆☆☆

The People Could Fly
by Virginia Hamilton
Knopf, 1986
178 pp. $12.95
Illustrated by Leo and Diane Dillon

Leo and Diane Dillon graced numerous science-fiction book and magazine covers in the late 1960s and early 1970s, until the field reverted to photo-realism and neo-pulp kitch of the Rowena Morril variety. Science fiction is diminished thereby, but the Dillons have had no difficulty finding work elsewhere, as with this handsome volume of black American folktales. The artwork is

(Continued to PAGE *23)*

The Reel Stuff

Kirk wonders if he'll make it to *Star Trek IV*

By Jessie Horsting

Reanimator's mad scientist at work

Underworld inhabitant

As in all things, the truth in the film industry is often buried under onion layers of little lies (sometimes great big lies), and it seems to me a journalist's duty is to peel away the hyperbole, the maneuvers, the dissembling and the gobbledygook to get at those truths. I feel I am armed by a fair amount of expertise and skepticism, qualities I consider essential to survival in Los Angeles, and I'll do my best not to let any of us get ambushed by Media Relations.

Moby Trek?

Whether we admit it or not, many of us had our interest in science fiction whetted by *Star Trek,* the television series. During the '60s, it kept some of us at home on Friday nights when we might otherwise have been out carrying a placard and getting thrown in jail.

For others, it was the first taste of the substance of cosmic ideas which immediately turned us into helpless addicts: we went cold turkey when it was canceled, got our fix when it was syndicated, OD'ed when the first film was released, and got the monkey off our backs when *Star Trek II,* The Real Movie, restored our faith that there was something in the essential triumvirate of Kirk, Spock and Bones which could bridge a twenty-year gap.

It was Nick Meyer's sure hand with the Jack Soward script that brought life to *Star Trek II,* though it had been relegated to the television division and producer Harve Bennett (*Six Million Dollar Man):* the release made $13 million its first three days, recouping the cost of production. Two years later, Leonard Nimoy directed the Nimoy/Bennett-scripted *Star Trek III* to mixed reception, resurrecting the character of Spock and leaving an open-ended resolution promising yet another film.

Why am I telling you all this?

Because they're back.

Star Trek IV: The Voyage House has finished principal photography on the Paramount lot, and by the time you read this should have most of the opticals and special effects completed at Lucasfilm's ILM facility in San Rafael, California. Paramount plans a Christmas release, though it could push the date up to Thanksgiving if the portents are right — it has something to do with a full moon, the birth of a two-headed calf, and the preferences of the senior distribution executive's six-year-old daughter.

There was a little trouble getting the grew off the ground for this fourth go-around. Salary negotiations between William Shatner and Paramount delayed the project — Nimoy has an equal compensation clause in his contract guaranteeing whatever Shatner gets, he gets — and Shatner was reportedly asking for $2 million to reprise his role. Four million dollars above the line was out of the question for producer Harve Bennett, and development came to a halt. In what may have been a calculated maneuver, Bennett and Nimoy called in writer Harlan Ellison for a script meeting. Ellison has often stated that, if given the opportunity to script a film, his first act would be to kill off Kirk.

Ellison wanted a half million to pen the script, with or without Kirk. It was more than Bennett felt was necessary to pay, in light of the track record for the films. Good story or bad, they all make money. And perhaps Ellison served his purpose, Shatner and Paramount settled soon after. Shatner agreed to accept a more modest amount for *Star Trek IV,* though apparently he has been promised the positions of executive producer and director for the next film. The first-draft script duties were assigned to two relative unknowns, Steve Meerson and Peter Kirkus.

Executive producer Ralpy Winter and Bennett reassembled the core cast with some new additions familiar from the series. In addition to Shatner, Nimoy, DeForest Kelly, Nichelle Nichols, George Takai, Walter Koenig and Robin Curtis are Majel Barrett, Mark Leonard, Grace Lee Whitney, Jane Wyman as Spock's mom and Catherine Hicks in a feature role. More exciting news is in, of all things, the script rewrite. Bennett called on Nick Meyer (*Star Trek II, Time After Time)* to punch up the time travel adventure, though a few eyebrows have been raised over the inclusion of whales as a pivotal element in the back-to-earth saga.

Publicist Eddie Eagen confirms that yes, there are whales, but they serve as the film's McGuffin: "I handle calls on the whales every day. They're a part of the script, used the way the statuette was in *The Maltese Falcon.* They are not what the story's about." (There's little doubt in my mind that the script is under the influence of last year's escapades of Humphrey, the Humpback Whale who was helped to freedom after his much-publicized detour in San Francisco Bay.) Eagen describes *The Voyage Home* as a "more light-hearted" adventure, recalling episodes like "The Trouble with Tribbles" and "Shore Leave."

Nimoy returned to direct this fourth installment, perhaps to prove *ST III* was no fluke — though we'll have to wait until Christmas to see how heavily flukes figure in *Star Trek IV: The Voyage Home.*

Looking for Mr. Gutwrench

Horror writer Clive Barker, last year's winner of the World Fantasy Award for Best Collection with his *Books of Blood,* is scaring up lots of business in Hollywood. A respected playwright and scenarist in his native Britain, Barker claims he was impelled to pen his stories after reading a number of "very bad" horror tales and feeling that he could do better. Barker's labors were well received by critics and fans, and two were quickly optioned for film: "Rawhead Rex" and "The Yattering and Jack." Charles Band's Empire Productions bought the two, and three other properties for development, concurrent with an independent production of the Barker-scripted *Underworld,* due to be released this summer.

Stephen King fans can look forward to at least three new starts based on his stories: *Pet Sematary,* the on-again, off-again project of director George Romero that may or may not be produced by Dino De Laurentiis; *Creepshow II,* another King/Romero collaboration; and *The Running Man,* starring Arnold Schwarzenegger. Also gearing up for production is the King/Straub collaboration *The Talisman,* purchased for a cool million by Steven Spielberg, which may be scripted by King himself. Others in development? *It, Graveyard Shift* and "The Monkey," according to reports.

Reanimator's Stuart Gordon is at it again for Empire. You may have been among the squeamish who missed last year's ultimate gross-out black comedy adaptation of the H.P. Lovecraft tale, but Gordon took another whack at the founding father of bone chillers with *From Beyond,* due out late summer. Stephen King said of Gordon's *Reanimator:* "It's the first time a head has ever given head..." More on Empire later, but first this announcement...

Soon to be a Major Motion Picture

There are several bestsellers finding their way on production schedules, timed for their paperback releases. Hugo Award-winning author David Brin is the possible scripter for Warner's adaptation of his post-holocaust saga, *The Postman.* Stephen Tisch

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Orthographic projections of Flush (Hoyle III)

Eastern hemisphere Western hemisphere

Orthographic projections of Straight (Hoyle V)

Eastern Hemisphere Western hemisphere

Orthographic views of the hemispheres of Janus (Ruby I)

Hot hemisphere, arbitrary prime meridien shown.

Cold Hemisphere, 180 meridian shown.

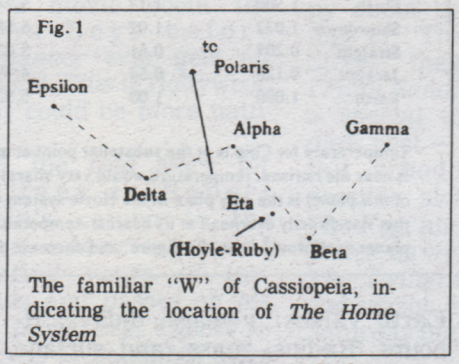
The Home System

By Hal Clement

THERE IS a fairly long spectrum of ways to set up a hard-science space opera. The extremes are (1) to start without the faintest idea of what your plot is going to be, and work out a world or system of worlds in all the detail your properly disciplined imagination will permit; and (2) come up with a plot and set of events, and build a world or more with the needed qualities. My personal preference is for the first method, but I'm not really stuffy about it; the other also lends itself to hard-core science fiction, and I have sometimes crept at least a short distance toward the end of the spectrum to set up a background situation I wanted for a story.

This article is extreme Method 1, since I don't at the moment plan to write any stories about this system (I *may;* I have fallen rather in love with one of the planets). I am not, of course, filling in every detail of this system of worlds; in the first place it wouldn't be possible, since I'm not an Arisian, and in the second you're supposed to do a reasonable amount of the work yourself. I'll expect you to be careful (so will the rest of *ABO's* staff), since I want to enjoy your output and am the sort of person who is bothered when the Earth crescent seen from Luna widens noticeably in an hour or so, or people light fires with a myopic character's glasses.

The star system being used here is quite real, and I am sticking to its characteristics as far as we know



The familiar "W" of Cassiopeia, indicating the location of *The Home System*

them. It was chosen partly because of my contrariness. A lot of people in the last few years have jumped on the bandwagon of admitting that there are probably a lot of planetary systems and many intelligent life forms in this galaxy, but most of them still dismiss binary and multiple star systems as possible sites for life-bearing worlds. The idea is that orbits would be too unstable in such surroundings. I question this, not on mathematical grounds—I'm a high school teacher instead of an astronomer because of my mathematical failings — but on what seems to me an observational basis.

There are a lot of multiple star systems in space. It seems safe to bet that many of them are as old as or older than our own solar system's four and a half billion years, so their orbital arrangements are presumably fairly stable. I have checked carefully through the Worley catalog and similar sources of information, and find that there seems to be no multiple star system in which the mean distance separating the closer (or closest) pair of suns from each other is greater than about one-ninth of the distance separating that pair from its nearest other neighbor in the overall system. On purely pragmatic grounds I have adopted this ratio as a rule of thumb. I feel safe in putting planets around the individual members of a wide binary, as long as the farthest-out planet of either star has a distance less than one-ninth of the way to the other sun. If the stars themselves are very close, I will set planets going around the pair, but the innermost of those planets is more than nine times as far from the center of the system as the two suns are from each other.

This makes the wide binaries very nice scenarios for science-fiction stories; one can reasonably have a larger number of habitable worlds, and one doesn't need faster-than-light travel to get from one of them to another.

So here is a wide binary. It's quite real, and can be seen (though not as two separate stars) from Earth by the unaided human eye. It's not very bright—between third and fourth magnitude—so the Arabs apparently didn't consider it worth a name of its own. Amateur astronomers know it (quite well; it's on the list of "easy" double stars) as Eta Cass, the fifth brightest star in the constellation Cassiopeia, or as 19 Cass (Flamsteed numbered stars from west to east across each constellation). The colors of the two stars contrast very prettily in a medium-sized telescope; the brighter is yellow, about the color (and temperature) of our own sun, while the fainter is very red.

Some double stars are merely accidents of perspective, with one lying many parsecs farther from us than the other, but there is no doubt at all that this is a true binary system. Since the first measurements were made in 1832, the fainter star has changed its direction from the brighter by over two hundred degrees, and their apparent separation first decreased for many decades and is now increasing again.

The two hundred degrees does not, unfortunately, mean that the system has completed over half its period since 1832. Orbital motion is fastest when two gravitating objects are closest together, and these two stars seem to have been at their closest about 1890 (as seen from Earth; allow for their 18-light-year distance from us if you're doing a story in which that date is important). In fact, the system has not come anywhere near completing half its orbital period since discovery, and there is room for some doubt about the precise shape, size, and period of the orbit. Published elements range in period from 526 to 480 years (the latter the most recent I have seen—1969). I did a freehand-quickie for this article from measurements running up to

(Continued to PAGE *8)*

Home System

(Continued from PAGE *7)*

1958 and got 507 years, with no mathematical refinements such as least-squares solutions. Five centuries is certainly in the right ball park; anything within five percent of that is no strain on the known facts.

The size and period of the orbit give the total mass of the two stars. Their individual masses have to come either from theoretical considerations based on their brightness, or measurements of their motions compared to still other stars, which should give the center of mass of the system. Published values from these two methods aren't too consistent, and I am attaching greater weight to the former results. Table 1 gives my chosen figures. They are, or should be internally consistent and not grossly out of line with the actual measurements.

For those not familiar with the language, Figure 2 may help. In addition:

The letter "*a*" is standard for the semi-major axis of an elliptical orbit; "A.U." stands for *astronomical unit,* which is one mean distance of Earth from our sun, about 1.5E8 kilometers (in computer basic).

The letter "*e*" is a pure number defining the shape of the ellipse (*eccentricity* is the word it stands for). Its handiest use in the present situation is for calculating the smallest separation (periastron) and the greatest separation (apastron) of the two stars. These are respectively a(1 - *e*) and a(1 + *e*). If you get 32.29 and 105.11 A.U. for these numbers, you have the idea and can use the formula on the planets later on.

The letter "*P*" is the orbital period in Earth years; "*T*" is a date when the stars were at periastron.

Masses use our own sun's as the unit. Luminosities do the same, but are as the human eye would react. It must be remembered that the fainter star, B, puts out much of its radiation as infra-red, so that for calculating the temperatures of any planets it may have we should credit it with about seven percent of Sol's brightness rather than a little over three.

Magnitudes, for those unfamiliar with them, are on a rather annoying exponential scale. As a rough translation and an idea of the scale

TABLE 1
The Eta Cass Stars

Relative Orbit:	
a in astronomical units	68.7
in kilometers	1.03×10^{10}
e	0.53
P (in Earth years)	481.25
T (real date)	1872.0
Masses (Sol = 1):	
Total of system	1.40
Hoyle	1.02
Ruby	0.38
Luminosities (Sol = 1)	
Hoyle	1.08
Ruby	0.034
Magnitudes:	
Hoyle (from Ruby, at periastron)	-18.0
(from Ruby, at apastron)	-15.5
Ruby (from Hoyle, at periastron)	-14.3
(from Hoyle, at apastron)	-10.5
Distance data:	
Parallax	0.182"
Distance (parsecs)	5.49
(Light Years)	17.9

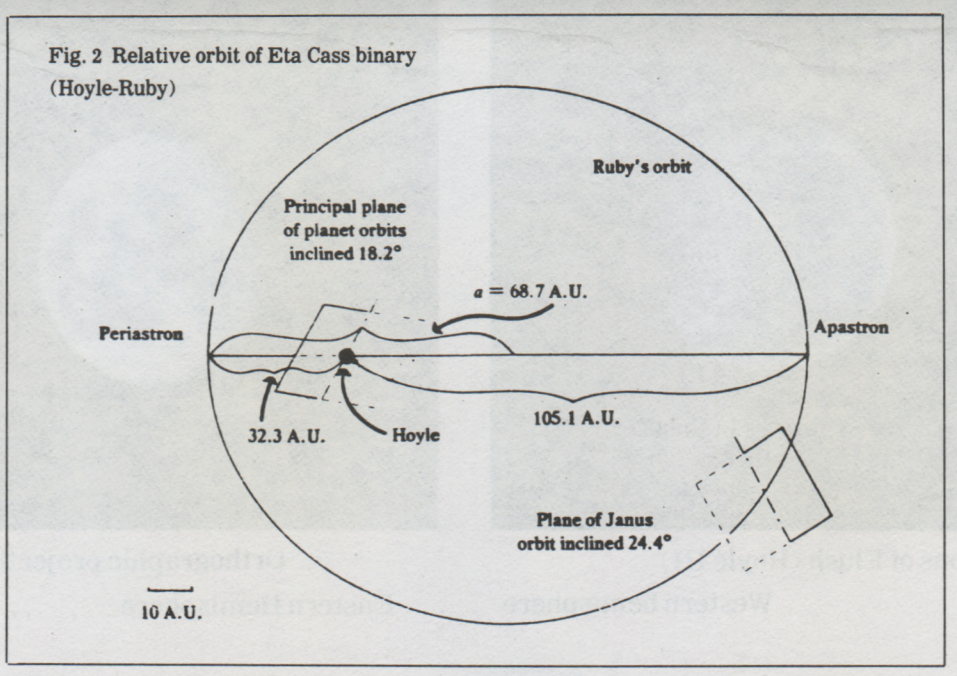


Fig. 2 Relative orbit of Eta Cass binary (Hoyle-Ruby)

itself, our own sun appears to us at about magnitude -26.5; the full moon about -12.5; Venus at its brightest about -4.5; the north star about +2; and the average human eye on a clear night well away from cities can see stars to about +6. Thus, the eccentricity of the Eta Cass orbit changes the distance between the two stars enough to alter the brightness of each as seen from near the other by about three and a half magnitudes. Please note that, bright as they are to the eye when seen from their neighbor's planets, neither one can at any time affect the *temperature* of the other's worlds by more than a few hundredths of a degree.

Giving planets to these stars is a different matter, as far as fitting the observed facts is concerned. No current Earth-based instrument could detect real ones if they were there, so in one sense I'm free to do any thing I like. In others, though, there are still restrictions — things like the laws of physics and chemistry. Personally, I also feel the need to explain how a particular planet got there in the first place, even though there is no really complete theory for planet formation at the moment.

Nevertheless, I am assuming the general correctness of the accretion idea, in which volatile materials are prevented by temperature from entering largely into the formation of planets close to a star; this at least explains the low-density gas-giant Jovian worlds farther out. It also fits in with the reasonable, though not really proven, idea of the Oort cloud of a hundred billion or so icebergs—comet nuclei—ranging out to half a parsec or more.

Further, I am assuming that the cloud from which the Eta Cass system condensed was slightly richer in heavy elements than the one which produced us ("Heavy elements" being defined astrophysics-style—anything of atomic number greater than two).

The one-ninth distance rule indicates that neither of the stars can have gas-giant planets. I am willing to suppose that ices did condense early in the system's history, but at the distances where this would happen the ice bodies would be heavily perturbed by the two stars. I am guessing that some would have been ejected to the Oort cloud or out of the system entirely, and some moved to inner parts of the two subsystems where parts of them might have become involved with the growing Terrestrial protoplanets before they evaporated again. This justifies (?) my giving excess ocean to some of the Terrestrial planets.

Since it seems likely that the nuclei of protoplanets originate at random distances from a star, though the ones which start to close together probably merge eventually, I have been rather arbitrary in assigning orbital radii to the planets of Star A (which I am calling Hoyle from now on). I have given it six worlds, ranging from a sort of infra-Mercury hotter and denser than our own innermost planet to a roughly Mars-equivalent world. Again, it seems easier to summarize the vital statistics of these planets in tables (2a, 2b).

The letters "*a*," "*e*," and "*P*" have the same meanings as in Table 1. The temperature is on the Kelvin scale, on which Earth's *average* value is something like 290 degrees, and water boils (under our standard atmospheric pressure) at 373 degrees. Abbreviations refer to Earth values: y-years, d-days, H-hours. Radius, mass, and surface gravity are all compared to Earth as unity. Densities are in grams per cubic centimeter (Earth's average is 5.52). Escape velocity is in kilometers/second (11.2 for Earth), and the surface pressure in millibars (slightly below 1,000 at sea level for our own world).

Four of the planets are denser than Earth, because of various combinations of composition and size (larger planets, other things being equal, have higher central pressures; and whatever your grade-school teachers may have said about solids being incompressible does not apply in this league).

The third, fourth, and fifth planets have more or less Earthly atmospheres, mostly nitrogen, with sea-level oxygen partial pressures of 270, 870, and 45 millibars respectively (about 200 for Earth). This implies, of course, that all three have photosynthetic life; free oxygen can't last more than a couple of centuries in a planet's atmosphere without constant renewal. I'll leave the rest of the life to you. The sixth planet's atmosphere is mostly carbon dioxide, though it is much denser than that of Mars.

Planets three, four, and five also have extensive hydrospheres, that of four being practically total—average ocean depth is over ten kilometers, and "dry" land is represented only by a few islands which are presumably the tops of Hawaiian-type shield volcanoes. Land-water distribution on the other two is shown on the maps (Figs. 3,4).

All oceans are considerably less salty than Earth's. In view of the greater supply of heavy elements, you can blame this on the greater volume of water, biological activity, or an assumption that the system is younger than ours (which would not go very well with the presence of native intelligent life, but solve that for yourself).

There are no moons in the system, and no asteroid belt. I am assuming that perturbation by the other star caused small stuff to be swept up in direct collisions with the protoplanets, but if you want to assume that an intelligent race deliberately cleaned out the menaces to navigation, go right ahead.

So much for the Hoyle subsystem.

The smaller and fainter star I am calling Ruby—it reminds me of one through the telescope. It is much less massive than Hoyle, as already noted, and the larger star's perturbation on Ruby's accretion disc caused a larger rate of collision among the latter's protoplanets, with the final result that a single, large planet was formed. This was the one I had most of my fun with. It is close enough to Ruby for most of the volatiles to be driven off during formation, so it, too, is essentially Terrestrial, rather than Jovian, in type.

But.

I have been trying for years to work out a planet whose atmosphere differs significantly from place to place. Temperatures are easy, gravity is possible, but atmospheres by definition are gaseous and gases tend to mix pretty thoroughly. Also, to form different atmospheres in the first place, something drastic and improbable—like really different life forms—would seem needed. In effect, one somehow needs two worlds in one.

So share my fun with Janus. I know this name has been used before, officially as one of Saturn's moons and less so in at least one science-fiction novel. Never mind; I have my reasons. Janus was the Roman god of doors, and is represented as having two faces, pre-

Table 2a: Hoyle's Planets

Name	*a* (A.U.)	*e*	P	Temp. (°K)	Rotation	Axis tilt
Chip	0.092	0.035	10.07d	1950	10.07d	2.2°
Pair	0.345	0.001	73.05d	570	44.72h	12.8°
Flush	0.818	0.023	267.7d	370	8.44h	31.4°
Showdown	1.157	0.041	450.0d	311	18.42h	21.1°
Straight	2.241	0.003	3.322y	224	21.94h	11.4°
Jackpot	2.981	0.044	5.096y	194	7.79h	18.8°
Earth	1.000	0.0	1.00y	290	24.00h	23.5°

Table 2b: Hoyle's Planets

Name	Mass	Radius	Density $(g/cm)^3$	Gravity	Escape Velocity	Surface Pressure
Chip	0.0238	0.27	6.67	0.327	3.33	$<10^{-2}$
Pair	0.434	0.77	5.25	0.732	8.41	$<10^{-1}$
Flush	1.500	1.13	5.74	1.175	12.90	2750
Showdown	1.072	1.02	5.58	1.030	11.48	5100
Straight	0.207	0.61	5.03	0.555	6.52	275
Jackpot	0.128	0.54	4.49	0.437	5.45	55
Earth	1.000	1.00	5.53	1.000	11.20	990

Temperature for Chip is at the substellar point at mean distance from Hoyle. In the region where Hoyle is near the horizon, temperature would vary sharply between sunlit and shadowed areas. The dark side of this planet is the only place in the Hoyle system where Ruby could effect the local temperature. With this star directly overhead at its nearest, temperature would be about 25° K. Any internal heat from the planet itself would raise this figure, and decrease the effect of Ruby.

sumably fore and aft, on one head.

The orbit of this world is small; the mean distance of Janus from its sun is 0.24 A.U., about a quarter of our distance from our own. This, if the orbit were circular, would make the planet's temperature average a little higher than our own (assuming comparable atmospheric influences such as cloud reflection and greenhouse effect). However, Janus has a highly eccentric orbit—0.25—and varies in distance between 0.18 and 0.30 A.U.

Also, it is locked into a 1:2 rotation-revolution knot. Its revolution period—year, that is—is 69.67 Earth days. Its axial rotation seen from outside the system—the so-called sidereal rotation—is just half this period. This does most interesting things to the planet's structure and climate.

First, the same hemisphere is always sunward at periastron, and the other one at apastron (see Fig. 5). Second, tidal stress by Ruby on its nearby planet differs greatly between the two ends of the orbit, and much of the resultant crustal strain is concentrated near the meridians dividing these two hemispheres from each other. Much of the rest is at the centers of those hemispheres—the East and West Poles, if you like.

(I am taking a chance here; this is not a calculated result, but one which seems likely from my general familiarity with celestial mechanics. You might call it intuitive; if someone can snitch a bit of computer time to check the matter, or simply feels that I'm wrong, I'll be glad to debate the issue at conventions. Program chairmen, please note.)

I am therefore giving Janus a tectonically active strip of land dividing the two hemispheres; vulcanism and faulting are both intense. Compression and tension alternate, at right angles to the strip itself, and subcrustal convection makes the strip a spreading zone comparable to Earth's mid-Atlantic ridge. Continents tend to be held at the hemisphere centers, with tectonically active regions here as well. The oceans therefore tend to form two more or less complete circles between the meridional mountains and the central continents (see maps, Fig. 6).

The mass of the planet is 4.43 times that of Earth, its radius 1.49 times, and its density and surface gravity therefore 1.32 and 1.97 times as great as Earth's. Its escape velocity is a little under 19 kilometers per second.

Table 3

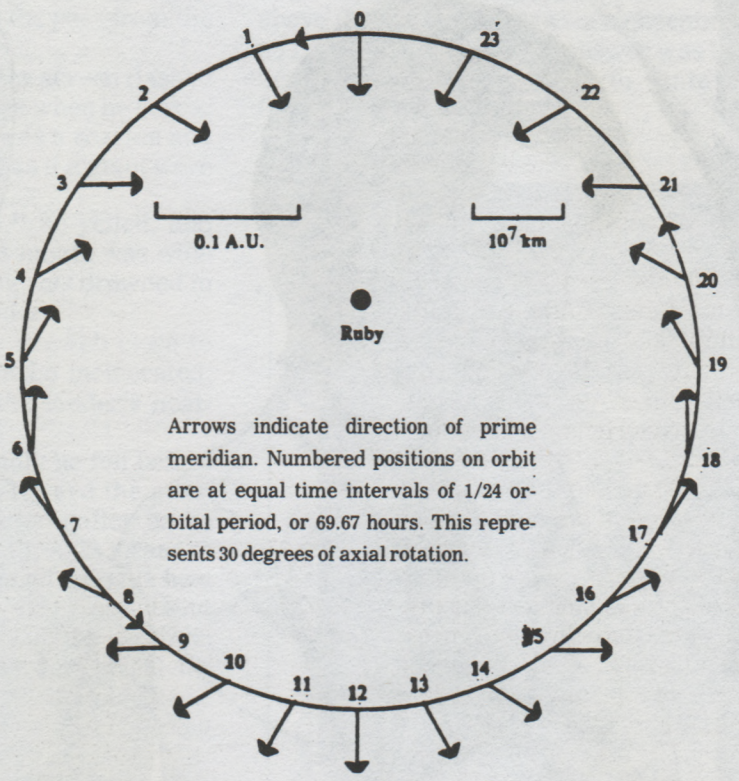
Substellar point on Janus at equally-spaced times during its year (intervals 1/24 year, or 69.67 hours).

Time	Ruby's longitude	Ruby's latitude
0	0 (definition)	-3.69°
1	4.8°W	-2.18°
2	12.0°W	-0.43°
3	19.8°W	+1.20°
4	31.4°W	+2.48°
5	49.0°W	+3.34°
6	62.5°W	+3.94°
7	80.5°W	+4.31°
8	97.8°W	+4.49°
9	118.0°W	+4.47°
10	137.7°W	+4.30°
11	158.7°W	+4.04°
12	180	+3.69°
13	158.7°E	+3.24°
14	137.7°E	+2.71°
15	118.0°E	+2.04°
16	97.8°E	+1.24°
17	80.5°E	+0.35°
18	62.5°E	-0.70°
19	49.0°E	-1.69°
20	31.4°E	-2.68°
21	19.8°E	-3.66°
22	12.0°E	-4.36°
23	4.8°E	-4.44°
24	0	-3.69°

Life originated independently in the two hemispheres. The hot one, whose central noon occurs at periastron, has developed photosynthetic organisms analogous to ours, which feed oxygen into the atmosphere. The other side of the world has life forms making use of the various oxidation states of nitrogen. These provide quantities of ammonia and hydrogen to the atmosphere, and ammonia, hydrazine, higher hydronitrogens, and even azides in the oceans and in the life forms themselves.

Naturally, mixing of the two atmospheres takes place over the mountain belt, but not so rapidly that biology can't keep up the supplies. In this gravity, an atmosphere consisting mostly of nitrogen and with something like Earth's average temperature drops to half its base density at an altitude of less than three kilometers. The ammonia-and-hydrogen rich atmosphere would have a lower average molecular weight, which would tend to make the half-density height greater, but its lower average temperature would tend to offset this effect. The main point is that the meridional mountain range would be a good, though far from perfect, barrier to the mixing of the two atmospheres.

Fig. 5 Orbit of Janus.



Part of this is the simple mechanical wall, extending for most of the way around the planet to three-quarters of the mass height of the atmosphere; the rest of the interference is chemical. Over the mountains ammonia and hydrogen react with oxygen to release free

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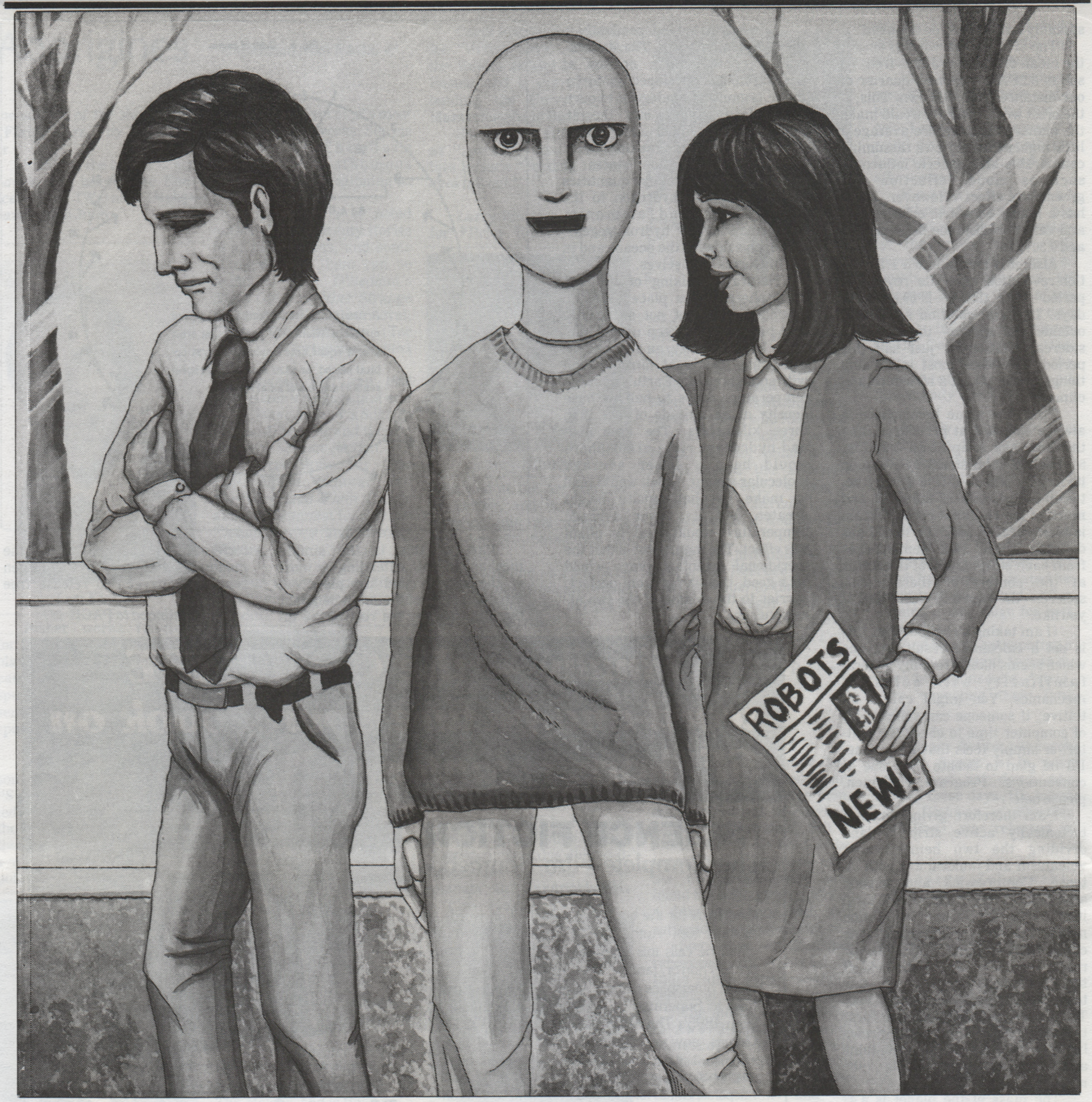

Fixing Larx

By Lou Fisher

It occurred to Matthew Wood at breakfast that Larx's share of the conversation did not contain the built-in brilliance of his former, glossier years. No longer did the robot come up with an assessment of Matthew's tie ("Indeed, sir — stripes?") or a decent rebuttal to the videoscroll news; now, for the most part, it was "yes, sir" and "no, sir," as if someone had squeezed the tips of his creative circuits. And there was the matter of the eggs.

"Larx," Matthew said from a seat at the table, "stop stirring the eggs."

"Yes, sir," replied Larx. And he stopped.

His arms fell. His face stiffened. His eyes went blank. But the eggs cooked on, with the wooden stirrer jiggling unattended in the pan. And Matthew, who was ready to leave for the office, was required instead to tap his fingers on the table, sniff the smoke in the air, and wait for Larx's timer to recycle. "Are you back with us yet?" he asked crisply. Talking crisply to a robot helped register the words as proper patterns in the ear circuits. In this case it seemed to have an effect.

Larx's eyes rolled back down.

But as he restarted himself, his left knee jolted and banged into the stove. At the impact, the stirrer, with bits of egg still clinging to it, bounced from the pan to the floor. Unknowing, Larx kicked it across the room. Yet, to his credit, he managed after all that to slide the remainder of the eggs onto a plate and set them down in front of Matthew. "Good morning, sir," he said. "Good to see you."

"This is not the first you've seen me," Matthew told him. "I've been sitting here, all dressed, and quite late for work, you know."

"Yes, sir."

Matthew pointed to the eggs. "Tell me, Larx, do you consider this an ordinary breakfast? A number seven in your queue?"

"No, sir."

"Ah," said Matthew. Now he was getting somewhere. If Larx could only realize what had gone wrong, perhaps he could initiate some repairs. "Then it's not ordinary?"

"It's not a seven," replied Larx. "A *six*, sir."

"You'd never know it," Matthew said. With the tip of his fork he poked through the yellow-black mess and even tasted a piece of it. Like charcoal dust, after a rain. He stood up. "Well, six or seven, or twenty-nine — I can't eat this!"

Larx leaned over the plate. "Not hungry, sir?"

"This stuff is so badly burned," Matthew started to tell him, "that no human being, even one who was starving in a war zone . . ." But how could he go on? Larx's face had begun to turn gray with signals from the disappointment circuits, the very circuits that Matthew would have disabled, if he could. "Cancel the last message, Larx. Replace it with this — I'm just not hungry."

Unconvinced, Larx clicked his tongue noise and scraped the eggs into the disposer.

Matthew watched them go down. Then with a finger pressed to his cheek, he studied the robot. But he saw only what he always saw. The head, without hair, was easy to inspect — no sign whatsoever of a nick or crack. The narrow body was, as usual, tucked inside Matthew's old blue sweater and other random leftovers of the upstairs wardrobe, while the feet, after years of being just feet, were now clad in a special pair of shoes they sold at Robotland. ("Indeed, sir — new shoes?" said Larx on the day they were bought.)

Matthew lowered his eyes and frowned. A bit of a problem with that left knee, that was for sure; but other than that Larx's legs could still bend and swivel in more directions than nature intended. So what exactly was going on? Maybe nothing. Or maybe it was time to get some advice.

As he headed for the door, Larx came up behind him.

"Your briefcase, sir."

"Thanks. I've really got to get going," said

Matthew, glancing at his watch. But when he reached for the briefcase, what he got decisively placed in his hand was the empty saddlebag from Larx's bicycle.

* * *

The moment Matthew walked into Robotland, his stomach began to hurt. A result, he thought, of skipping breakfast. And here it was lunchtime, and he was looking at animated displays instead of having his soup and sandwich. The demos bored him. That tennis robot in the corner; a decent backhand, sure — but why buy it when he could rent one at the courts?

"Just looking," he said to the saleswoman who pursued him.

The young woman with the red hair folded her arms, then hung around, close by, with a bit of a hum to show she was there. Finally, Matthew asked her if she had much experience in the business.

"Trained at the company school," was her quick reply. "And Robotic Science in college — not my major but right up there with my computer courses." She unfolded her arms and pushed a strand of hair behind her ear. "My name is Nancy."

Pink suit. White blouse. He had to admit that she was a pleasant-looking person to deal with. And her voice, though insistent, came with a smile that seemed to sooth the pain in his stomach. "I have a Larx," he said, more confidently, "who's twelve years old."

She lifted her brows. "That's old for a Larx."

"Well, I don't think so." Matthew moved over to a table of brochures. He'd been out of the market, out of touch, and long ago he had let lapse his subscription to *Robot World*. Now that he looked at the brochures, at the demos all around him — yes, there were new looks. New functions. But were they really made better these days? Larx had never needed any maintenance and, in fact, only one programming change — an option installed in the second year, at Larx's own request, a frivolous microchip that taught him to ride the bicycle. What more, Matthew wondered, could any new model offer?

The saleswoman — Nancy, he reminded himself — was at his heels, tapping him on the shoulder.

"Believe me, if you'd see what we scrap — " She waved her arm toward an unmarked door at the back of the display area, as if only the direction was important. Then she picked up a few brochures and fanned them out in front of Matthew. "I can let you try out anything in the store."

"No, I don't want a new one," he replied, taking a step back. "I just want information. About Larxes. Truthfully, what do the manufacturers say?"

Nancy gave it some thought.

Then she said, "The company that made your Larx is no longer in business."

"Well, I know that," Matthew told her. "But how long did they say, when they *were* in business, that a Larx should last?"

She touched her lips and stared into space. "The Larx, I remember, was way ahead of its time. Very popular, and very efficient. Thought of as a quality product. I didn't sell them back then, but the word was that a Larx was good for at least twenty years."

Matthew sighed. A pang of hunger turned up to get him ready for lunch.

"That's a relief," he said. "To tell you frankly, with some of the things going on with my Larx, I was getting worried about him. But he's only twelve." Matthew reached out to shake the woman's hand. "You've done me a lot of good. If you're still here someday when I'm ready for a new robot . . ."

"It seems to me," Nancy said, letting her hand rest warmly in his, "that you're more than ready right now."

He let her hand drop. "Oh, no. We just cleared that up. Larx is only twelve. You said he was good for twenty."

"You're mistaken. I didn't say that."

"Of course you did."

"Not me," Nancy explained. "That was the people who made the Larx. *They* said you could keep a Larx for twenty years."

"Then — "

"I'm sorry, do you want the truth?"

"Of course," Matthew said. He was thinking, however, that he should not have come to Robotland. Not yet. Not, perhaps, for several more weeks until Larx could attempt some reprogramming.

"The truth," Nancy was saying, as she looked directly into Matthew's eyes, "is that you've already had a lot more than you can expect from a Larx."

"But they said twenty years."

"About eight is the way it turned out."

"Eight!" He stared back at her. "What happened to *twenty*? They said twenty years."

The red-haired saleswoman spread her hands.

"That must be why," she said, "they're no longer in business."

* * *

Matthew was reading *Day* from the videoscroll when Larx came in with the coffee. By now he was watching every move the robot made.

Every move and every hesitation.

What was wrong? A little rust, Matthew thought, despite the guaranteed coating. Or — he could imagine worse — circuits grow brittle, microchips deteriorate, and here and there, unbeknownst to anyone, parts drop off inside. He sagged in the chair. The robot's aging could not be overlooked. At the most inconvenient moments there were major delays in Larx's response time; annoying, too, as if when a friend stutters and you have to wait it out. And the performance, a mystery from swivel to swivel.

"Sorry, sir," said Larx, setting down the coffee.

Matthew looked first at the cup and then at Larx's face. "What about? I mean, I don't recall you ever being sorry before."

"Twice before," Larx replied, obviously reaching into his abundant memory banks.

"Is that so? Twice, you say? When exactly was that?"

"Sir?"

"The times you were sorry."

"Robots — " A click came from Larx's left knee. It buckled right afterward, and he crumbled to the floor. But at once, before Matthew could even try to help, he was back on his feet and taking up, more or less nonchalantly, where he had left off. "Robots are never sorry, sir," he said. "Seldom need to be."

Matthew nodded. "Well, now, Larx, that's what I thought, too."

"About what, sir?"

"About being sorry. We both know that robots can never be sorry. Why are you bothering me about it?"

Larx's knee shook but stayed together.

"*Bothering* you, sir?" he said.

Then he turned briskly and left the room. Minutes later Matthew spotted him speeding by the window on his bicycle.

* * *

Nancy looked perky, as bright as her red hair, and that, he was sure, reflected the sales spirit of Robotland.

"Well, we disconnect a few every day," she said. She pointed to the unmarked door, then turned back to Matthew with her same, soothing smile. "What *you* do," she went on, "is bring the robot down here on some pretext or other, and as soon as we get hold of it, you just turn and leave."

Matthew drew back.

"Maybe I can get him repaired."

Nancy shrugged. "Not if it's worn out. Listen, all these years it's been repairing itself. That's what it does best. Believe me, if it can't handle its own circuits, it's beyond anything a service-robot can do."

Matthew looked away from her. Across the aisle, he saw an older couple testing a Dandy model, and for some reason his mind flashed back to the lonely years before Larx, when he stayed late at the office almost every night rather than coming home to an empty house. ("Good to see you," said Larx, at the very moment he was activated.) Of course, Matthew thought, companionship was not the reason for a robot. Cooking, cleaning, bringing in the mail, putting a log on the fire . . . Nancy's hand came onto his shoulder.

"We'll take care of everything," she said. Her eyes, by themselves, were a comfort. "We do it all the time. It's a standard procedure. Easy, believe me. The robot won't feel a thing. Not a thing. And it'll barely have time to realize it's being disconnected. A quick probe of the laser gun — *pttt* — and that'll be the end of your problem."

Matthew felt tired. "But Larx and I . . ."

"Sure. Nice. Ten years together, I know."

"Twelve," Matthew corrected.

"Well, you see? Far beyond the norm." Nancy looked knowingly at the door to the back room, then she turned to Matthew again. "Believe me, those Larx models gave out at six, and not a day over eight no matter how you took care of them. I can show you reports. Why, twelve years, that's outstanding. We might just want to write to the company about that, if only they were still in business."

"Dammit," Matthew said. He turned to her. "Nancy, I'll never have another one."

"You might think about," she responded, moving closer, "having a person instead."

* * *

Perhaps something only an owner could tell, but Larx was limping.

"Will there be anything else, sir?"

"You could get me my coat."

Larx swiveled, then swiveled back. Then he did it to the other side.

"The coat," Matthew reminded him, crisply again, to make sure he was understood.

Done swiveling, Larx backed away with some drag from the knee. "Exactly which would you want, sir? The stadium coat? Perhaps the raincoat, sir . . . or the warm-up jacket."

There was no need for Matthew to mull it over. "C'mon, Larx, it's the middle of January. You know I wouldn't go out without my wool-lined topcoat."

"Indeed, sir — January, is it?" Larx may not have been aware, but Matthew spotted it without trying, that there was a definite current coming from his puzzled circuit. In the twelve years they had been together, Matthew would have bet that the puzzled circuit, of all of them, of even anger and jealousy and other seldom active robotic traits, was the least used and the least required. Larx puzzled? So, because of that, was Matthew.

But a minute later Larx brought the topcoat, and slipped it politely over Matthew's arms. "Enjoy your day, sir," he said. Kneeling to one side, he fastened the coat's buttons, from the collar on down. "I'll have dinner waiting."

Quickly Matthew told him, "I'm eating out, with someone named Nancy."

"But, sir, on Mondays I always cook for you. You eat out on Wednesdays, occasionally on a Sunday."

"Well, this will give you an extra day of rest."

"Sir?"

"Yes?"

"I'm not in need of rest. I'm programmed to do certain things, and those are the things I do."

Matthew set down the briefcase and redid the front of his coat, where Larx had missed a button. "I know, Larx, I know. But it wouldn't hurt to let the chips get a little rejuiced. You're not . . . well, you're just not as young as you used to be."

"Not—" Larx paused for a second and his head fell into a tilt, from which angular position he said once more, "Not—"; and then he stopped.

Matthew moved in and looked at him. Despite the lessening of duties, Larx seemed to have cut out. "Larx," he said, as crisply as ever, but there was no sign of a restart, even after a full minute or two. Matthew put down the briefcase again and walked around the robot. He considered calling Robotland. But they'd be of no help; Nancy had already said so. Yet something needed to be done. ("I take care of myself, sir," Larx was fond of saying, as if it were a matter of vitamins.) But Matthew was afraid to wait any longer — who knew what was going on inside? Facing Larx again, he raised an open hand, turned it, and pounded the edge of it into the middle of the breast plate.

Larx's head straightened and a few unfamiliar noises preceded the return to robot voice.

"Is that your final word, sir?"

"It is for now."

"Very well, sir."

"Very well, Larx."

"Then if you don't mind, sir, I'll list a few suggestions for your dinner," he said. "And some for Nancy as well." He seemed to imply by his professional tone that all things human could somehow be electronically comprehended. So when Matthew left the room, Larx seemed to be in fine control. But when he drove home from the restaurant that evening he found the bicycle a wreck in front of the garage, as if someone had taken a major fall.

* * *

The saleswoman — Nancy, of course — took Matthew aside.

"Shows all the signs," she whispered in his ear. It was the first she'd examined Larx. "You're doing the right thing. It's beyond repair, and soon it may not function at all."

"Still," Matthew whispered back, his voice unsteady, "I've never had a robot disconnected before. Maybe if I wait — "

"It's liable to set your house on fire."

"Oh, no. Not Larx."

"Could be."

"Not Larx," said Matthew. "Not Larx."

Nancy gripped his arm. "It's only a robot," she said. "And listen, believe me, it won't feel a

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The Phoe

By John A

"Lost her again," said Sue Lenowitz, swiveling the power turret with the foot pedal, shifting the wide-focus telescope up and down with delicate touches of the joystick.

"Should be 'it,' not 'her,'" Feisal observed.

"That phoenix is a female," she said with an edge of asperity, "a real phoenix, not a storybook one. There we go." Another fraction of a degree, and she had the creature centered on the screen.

Scimitarlike wings extended, the phoenix was riding the updrafts on the slopes. Even after three weeks, the sharp perfection sent the same thrill through Feisal. Worth all his time and money.

Being so close to Dr. Lenowitz sent a not-unpleasant pang through him as well, but he could do nothing about that.

Maybe when they were back at Janus Base.

The image was ghostly; Ruby was still on the other side of the barrier range, and they were seeing by infrared.

"Female," she said, "see the way her trailing edge flutters."

"I shouldn't joke," soothed Feisal. "But as an Arabian, I have a sort of proprietary feeling toward the phoenix. The mythical one, that is."

Dr. Lenowitz laughed. "And I have a proprietary feeling for the real ones. But as I remember, more often than not the literary phoenix is 'him' rather than 'it.' A conspiracy of male writers."

Feisal thought her ability to laugh at herself charmingly feminine, after the ferocious sexual egalitarianism of his countrywomen. Not that Dr. Lenowitz wouldn't cut him up and put him out the lander airlock if it would feed her precious phoenixes — but that dedication was what he was paying for.

Luckily phoenixes didn't eat. Not human flesh nor anything else, except how did it go? "The air promise-crammed."

Tissues saturated with hydrogen and ammonia, the phoenix swooped away down the foothills to the west, dwindling on the screen as Dr. Lenowitz followed it with an automatic twist of the wrist.

"How long till Ruby-rise?"

"Still about fifty-five, sixty hours," she said. "We'd better get plenty of rest."

They certainly had, Feisal thought. They'd be too busy to sleep then. "What's the windspeed?"

"Thirty-four meters per second and rising, the last I looked. But the ground anchors will hold."

Even through the double hull and insulation, Feisal could hear the droning of the wind, diminished but ever-present.

Now that she had an oxygen surplus, the phoenix was turning back, growing larger and larger on the screen, a living ramjet, the gulf of the throat showing bright in the infrared image.

Metabolically the phoenix was "amphibious"; all other life forms on Janus were adapted to one hemisphere or the other, oxygen breathers of the hot face or ammonia and hydrogen breathers of the

nix Riddle

A. Taylor

cold, but the phoenix lived only on the border between.

The wings flashed by overhead, blurring off the screen for a moment before Sue swiveled the telescope. The phoenix was heading right up the canyon to the pass, but as they watched, it veered over and sideways out of its glowing trail of steam, and turned back across the canyon wall. What led the phoenix unerringly to the atmospheric stratum bringing hydrogen and ammonia from the cold hemisphere before they were oxidized? But then there was the way hawks and vultures found thermals back home; how often, wondering and envious, had he followed them to find an updraft for his glider?

"Mating begins about four hours before dawn?"

"It did," she said, "but remember my last observations were almost eight degrees north of here."

"Any reason for it to be different?"

"None, but you never know." The phoenix disappeared to the south. She spun the turret a few more times, but the slopes were bare in both directions.

Engaging the turret lock, she shut off the CCD coolant pump and the camera heater, closed the outside shutter and lowered the telescope into the trough in the hull. "Now all we have to do is wait. How about a game before we turn in?"

Immobilized by Janus's high gravity and dense atmosphere, they'd played enough chess never to be surprised by the other's moves. They talked easily while they played. "I still don't like this spot," she said. "Even if I chose it."

"But can't tell why," he pointed out.

"No trees."

"Why no trees though?"

"If I knew," she smiled, "it wouldn't bother me." Feisal moved his bishop.

She looked sharply at the board. "Oh, oh." Scowling with concentration, she leaned over the game. If only he could tell her how he felt. But he didn't dare. Not just from fear of rejection, but because this was the wrong place and time; Janus Base was hundreds of kilometers away, and they had to depend totally on each other, without hesitation. He had volunteered, as good as demanded, that she take him as her assistant, and would have to stick to the role he had chosen. Romance was out of place. Especially now that they had achieved a comfortable working relationship.

Even if he ached to touch her red hair, Feisal could view himself with some amusement. Here he was, a grown man with a good deal of experience, as dreamily obsessed and as tongue-tied as when he had been a boy going to school in England. How Uncle Harun, with his man-of-the-world ways, would laugh if he knew.

Finally she moved her knight. "There!"

Now she had him in a tight place. After a mo-

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Phoenix Riddle

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ment he glanced up to tell her so, but she was looking at him without seeming to see him. He'd been catching her in these moments of abstraction lately. "Anything wrong?"

She blinked, and actually blushed. "No, nothing. Figured out what to do now?"

"Can't. You've got me where you want me."

"Not quite." She was blushing again.

"Huh?"

"Oh, it's not checkmate yet."

"But it will be," he said. "So I concede."

"It's not that bad."

"Within five moves."

"Then we'd better get some sleep, so we can work on the phoenix riddle."

"You know best."

"Good night," she said as she came toward him.

"Good night." Feisal stood up and folded back his seat so she could get by.

She moved past him carefully, eyes averted, only inches away. Just like every other night. He wondered what she thought at these moments. Probably going over the phoenix oxidation-reduction cycle.

The door of the main cabin folded shut behind her, and Feisal undressed and got into the auxiliary bunk by the dim red light of the status board. He thought about Sue Lenowitz in the next compartment, and wondered what she wore in bed — that was the wrong thing to think about.

The wind was louder. Its velocity had increased to 53 meters per second when they finished their game, but the lander was steady as the mountain under it.

* * *

Two years and an appreciable fraction of his personal wealth, that's what it had taken to get here cooped up in a lander in a howling gale toward the end of the month-long night of this strangest of all planets, a clumsy assistant and untrained observer tolerated because he was paying for the expedition. That picture of a phoenix in flight made it worthwhile to Feisal.

Perhaps others would not have responded to the image so intensely. But Feisal was an anachronism, obsessed with birds and gliders in a century of starflight, nearly freezing his feet off trying to beat the sustained flight record for unpowered vehicles. Utterly vulnerable. Like a supersaturated solution waiting for the tiny additional crystal that was the knowledge of creatures called phoenixes who lived their whole lives on the wing. Even if they were on a planet circling another star.

That instant he had determined to see for himself, no matter what it cost. His determination had grown as he had answered his mother and uncle's arguments; it had carried him through the crash courses in xenology and the meteorology of Janus, it had brought him nearly eighteen light years, and most difficult, it had convinced Dr. Susan Lenowitz.

Most of the arrangements had been through intermediaries, but Feisal had had to clinch the agreement himself. Dr. Lenowitz might need funds to continue her study of the phoenix, but not to the point of accepting a fool or deadweight as assistant.

He had planned to rely on his charm, but fortunately the trip out gave him little in the way of distraction, so their first conversation had been mostly his asking one question about phoenixes after another. The agreement almost fell through when Dr. Lenowitz discovered Feisal had been buying a look at her preliminary data transmission; he had had to talk very fast to convince her his only motive was to learn everything he could in advance.

Once accepted Feisal became her assistant in all ways. She took him at his word when he said he wanted to be useful, not a millionaire along for the ride, working him twelve and fourteen hours at a stretch, having him check equipment and stores, teaching him how to pilot a lander, showing him how to pace himself while moving in a high gravity spacesuit, giving him tape after tape of field observations to review, quizzing him when she wasn't answering his questions.

She was pleased at how much he knew already, especially about the meteorology of Janus, insisting that his understanding of the weather model was better than hers, "though one thing to remember is that theory doesn't always work on Janus's weather. Not yet anyway, with the two atmospheres and the barrier range and all."

Finally they were ready. She picked the site after much consultation of satellite maps and discussion with survey personnel. "It looks perfect for phoenixes, plenty of fireweb in the area, and the pass is low enough to allow even more atmospheric crossover than my last place."

Dr. Lenowitz was right; they started seeing phoenixes as soon as they descended through the cloud layer on their landing approach. There was comparatively little wind, so she switched the ducted fans to hover, and let the autopilot hold the lander while she unlimbered the telescope for a good look.

Though he had to stand by the controls in case of gusting, Feisal missed nothing; she put everything she saw on the repeater screen. The scale was daunting even at second hand, but the magnificence of the scene washed out fear; back home nobody'd believe Janus's barrier range. Feisal decided to take a few holograms just in case.

"Over there to the south, they're heading up into the pass — and here come some more out of more oxygen — oh this is a great place, we picked a great place--"

Just as carried away, Feisal began to chant:

Let the bird of loudest lay,

On the sole Arabian tree--

Her delighted laugh ran on the intercom. "You know it too!" and she came in on the next lines:

Herald sad and trumpet be,

To whose sound chaste wings obey.

They continued to recite what they remembered of Shakespeare's strangest and most magnificent poem as the phoenixes burst and swung into the field of the telescope, and all the way down Sue glowed with exhilaration. And Uncle Harun had talked about the coldbloodedness of scientists!

But the instant they were stopped she fired the ground anchors on the landing struts into the rock under them, switched off the main fusor, and ran through the checklist. She'd taught Feisal enough so he could cross-check against her to make sure she'd missed nothing.

"Well, here we are," she said lamely, but the excitement in her voice belied her words. "In the haunt of the mythical phoenix, though I'm afraid there are none of your nests of sandalwood and frankincense and myrrh."

This was a side to her he had never imagined. And Uncle Harun never could imagine. "I don't mind. Just so there's fireweb."

She sobered up instantly. "You've reminded me--" She headed back toward the telescope turret again.

"Of what?"

"Something that didn't look quite right on the way down." She got into the turret seat, unlocked the turret and lifted the telescope out of its recess again. The CCD was still cold and the camera was still hot; the first image came on instantly. She pointed up the pass. "Notice anything about the trees?"

"There aren't any?"

"Exactly." She swung the telescope. "And there aren't any here. Or here. And none around us even. Just those way off to the south."

"Is that wrong?"

"Firewebs need ammonia, but there should be plenty here."

"Maybe they burn off?"

"Remember firewebs are meant to burn off; there won't be a next generation of trees if they don't, their seedcones won't open unless there's fire."

"Maybe it's because they don't burn off?" Feisal ventured tentatively.

"If it weren't fireweb--but if it's not burned off, fireweb just lives another year till it is. And they'd burn sooner or later, with phoenixes about."

"Flood?"

She swiveled the telescope toward the canyon edge. "No, the slope isn't steep enough, and besides the channel's four hundred meters away here. So we ought to be sitting in the middle of a bunch of fireweb."

Just as well they weren't, thought Feisal; with the azides concentrated in waste vacuoles, a stand of fireweb didn't just burn, the trunks and branches exploded.

"I don't like it," she said.

"Why not?"

"Because I don't understand it." The only thing that might give some explanation was a soil sample; they both put on their spacesuits, and she went out the lock on her safety line while he handled the reel. He had his own line clipped on for instant action in an emergency; the wind speed was moderate for Janus, but no point in taking chances with that pressure. Without the powered suit and the occasional assistance from maneuvering jets, movement would be impossible.

"You all right?" Sue was invisible beyond the frame of the lander door. She'd drilled him in using the suit, but high gravity still made him nervous.

"Just fine," said his suit phone. "I'll have the sample in a moment, and be back in with you."

She came back around the bulge of the lander and slowly raised the sampler to him. He grasped the handle and lifted it into the lock as she came in and pulled the door shut. "OK to release safety lines."

She waited impatiently for the automatic analyzer to disgorge its findings, and when they came was as puzzled as before. "Everything that passes for humus here, lots of nitrates, even bits of burned fireweb. This whole slope ought to be thick with them all the way to the pass."

"So why not forget it?"

"It bothers me. Oh well, we came here to watch phoenixes."

Unfortunately, that meant not getting enough sleep. Phoenixes never slept (Sue compared them with sharks on Earth). For them breathing was eating, and flying was breathing.

So they slept watch and watch, one person almost always riding the telescope — Feisal learned to handle it quickly, though never with her fluid precision — and the other fetching meals when awake, or spelling the one on watch when bladder or gut demanded. Often Sue or Feisal would sleep on an inflatable mattress next to the telescope turret so as to be available if the other needed them. When both were totally exhausted they would put down the air mattresses side by side, and set the computer to monitor for phoenix radar signatures.

The phoenixes made it endurable.

The phoenixes and Dr. Susan Lenowitz. In spite of their constant forced intimacy, and that neither of them had time to wash and bathe regularly, so her hair began to resemble a red mop, she fascinated Feisal.

Part of it was her steadiness, her constant good humor, the way she could joke in the midst of seriousness, how she looked asleep on the air mattress when there was a lull and he could stop whispering notes into the hush-phone. But it was also her total acceptance of him as a collaborator; she was the expert, yes, he was the assistant, but they were both partners. She was even planning to put him down as co-author when she wrote up the expedition for *The Journal of Xenobiology*. "Now wait a minute — I don't even have a degree!"

"The people at Oxford say you do."

"But that's in modern languages--"

"It's a degree."

"But not the kind that counts," he said. "You know what I mean."

"You have eyes and intelligence, you want to know everything there is to know about phoenixes. Worth more than any doctorate in xenobiology."

No matter how exaggerated this was, he *had* learned a great deal about phoenixes. Every watch he learned more; her preliminary lectures and tapes back at Janus Base had been just that — preliminary. Using the scanning bolometer and his own local variations on the planetary weather model (made possible only by the high-level programming commands even he could use) Feisal was beginning to hazard a guess at how the phoenixes found the still-unoxidized hydrogen and ammonia above the pass.

Most exciting of all was his growing recognition of the steps in the life-cycle of the phoenix; already the females were storing protein for gestation, and occasionally he would see two break into bits of the nuptial flight pattern as they passed each other.

He wished there was a nuptial flight pattern for two people in a cramped lander.

* * *

There was something missing when she wakened him. Then Feisal realized what it was, the howling of the wind was gone; it was the so-called "dawn lull" — the strange things the barrier range did drove the meteorological programmers to continually change their planetary weather model. "Five hours to Ruby-rise."

"Much activity?" he asked while he splashed water on his face.

"Not yet, but what there is is lively. Here's hot tea, and what kind of breakfast shall I punch for?"

"Mock omelette."

The wind indicator showed no pattern, the winds kept shifting weakly, and once seemed to be blowing back through the pass.

While he ate he watched the screen. Already a few phoenixes were pairing off in the dizzy zigs and zags of the courting flight.

He never finished, because suddenly one couple was off in a long straight flight up into the mouth of the pass, and he was dictating notes as fast as he could talk, while she was swiveling the telescope

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Phoenix Riddle

(Continued from previous page)

here and there trying to get it all. "Turn on the fisheye," she yelled, and he rushed over and flipped the switch without breaking his monologue — the fisheye lens camera on the top of the lander would record everything, and between it and the more detailed pictures from the telescope, they should be able to reconstruct all that was happening.

"They're mated," she said as the two phoenixes came back down the pass, and Feisal could see the long extension connecting the female with the male flying just above and behind her; the two phoenixes moved as one, mated for good.

Many of Janus's lifeforms had short gestation periods, but only the phoenix had one measurable in hours. It was hard to imagine, the soluble proteins being broken down and resynthesized into the two or four embryos at such a rate, so much of the parents' tissues being taken, from the male as well as the female — a sort of secondary umbilicus, the extended male organ conveyed nutrition as well as sperm.

More and more of the phoenixes mated, until the sky about was filled with couples sedately circling between the layers of hydrogen spillover along the barrier and back out over the foothills.

Watching the pair on the telescope screen, Feisal began to sing:

Sieh jene Kraniche in grossem Bogen!
Die Wolken, welche ihnen beigegeben,
Zogen mit ihnen schon, als sie entflogen....

"That's beautiful," she said, "what is it?"

"The Crane Song' — from an early Twentieth Century opera," he said diffidently.

"Go on!" she insisted. "Sing the rest!"

In gleicher Hohe und mit gliecher Eile
Scheinen sie all beide nur daneben....

Afterwards, he translated the lyrics roughly:

Look at those two cranes wheeling wide!
The clouds, which have been allotted them,
Drew them already when they left the nest....
At equal height and equal speed
Only appearing side by side....

"Feisal, you're amazing! That Oxford degree in modern languages was worth all your time."

"It was more fun than the MBA from Jidda. How long now?"

"Ruby-rise in less than an hour. I set the timer on that first mating — they ought to go in about forty minutes."

"You know," he said after a while, "I wish everybody could see this."

"The cameras are running."

"And we're getting great pictures. For scientific purposes."

"Anything wrong with that?"

"Of course not," he said, "for people as interested as we are. But what about the average person, he'll miss so much of the excitement. I'm not knocking our pictures or what we're doing, but we aren't professional filmmakers--"

She rode the telescope around before answering. "I think I see what you mean. But that would cost--"

"I might be able to raise the money. You wouldn't mind? I could keep enough control so it wouldn't be cheap or oversimplified--"

"Well--"

"I want to share this-- Why should we be the only people to see the phoenix?

"You think you can raise the money?"

"I'm going to try."

"Then I'm with you. It's just such a new idea for me." Feisal could tell she was trying to think this over. A moment later, "this part wouldn't be interesting — just mated pairs soaring."

"Not visually," he admitted, "unless you think what's going on inside the phoenix. Leave it up to the director to suggest the excitement."

"You're right. There's other things film can do than just record data."

"How long to go?

"Six minutes on that first couple." She swung the telescope back and forth, following the slow soarers.

Suddenly she stiffened, spun the telescope. "Must have missed those, mated before I looked that way."

Gestation finished, the linked phoenixes had set themselves afire and were dropping toward the fireweb forest down the line of foothills. Symbiosis: fireweb seedcones only opened in fire, while the newborn phoenixes had to have the updraft of the firestorm to lift their birth sacs — those who survived would emerge from the bursting membranes to live on the wing, with no reason to land, unable to take off again if forced down.

Another pair caught, half-gliding, half-falling to their consummation.

Puzzled by the angle they took, Feisal glanced at the wind indicator. The wind had actually reversed, was blowing back down the pass from the East. From the cold hemisphere--

Before he could do anything, the screen flashed pale yellow, and all Feisal could see when he looked at it was a bright rippling. There was a roaring and the lander shuddered and creaked as if a giant were playing with it.

"Hydrogen — from the pass," he yelled, and couldn't hear his own voice. Sue's mouth was wide open, but whatever she was saying was drowned in the continuous overpowering thunder.

No wonder there wasn't any fireweb close to the pass — even the seeds would be incinerated. Like they would be, in spite of the lander's heat-shielding.

The lander was shaking so badly he fell before he got more than his own length toward the nose. Stores were falling in the unsecured galley as he pulled himself up, and as he went through a case of nutrigel leapt off a shelf and dropped onto his heel and ankle. He went down again, howling without hearing it in the cacophony — it hurt so much he saw nothing for a moment. When he opened his eyes, his foot was pinned under the case, and Sue was out of the telescope turntable and staggering toward him.

And then the roar became even louder, if louder was the word for a sound you felt with your belly, and the force playing with the lander got down to business.

She fell sideways and backwards. Her head struck the wall and she went down limp.

She had been trying to help him, but there was no time to help her. He couldn't stand up after he got the case off, his heel and ankle hurt so badly, so he rolled and dragged himself forward and up to the controls.

He flipped off the safely lock and blew the ground anchors free. Even with the ducted fans and the emergency thrusters on full, the lander went only a few meters up before it was thrown sideways and nearly slapped into the ground.

It was almost two kilometers before the lander went more or less where he wanted it to for longer than a split second. He took it up to a safer altitude and put in the autopilot.

And then the sky stopped burning.

In any other circumstances he would have collapsed from the pain, but Sue was hurt. He was holding her head in his lap and moaning as much from terror as from pain when her eyes opened. Her mouth moved and he could hear something, he wasn't totally deaf.

She touched her temple gingerly and then noticed the way his foot was pointing sideways.

First an analgesic, then a hopping trip leaning on her shoulders, so that by the time she finished putting on the lightweight cast, they could understand each other after a fashion.

"Now we know why there were no fireweb by the pass."

"I was right to be bothered," she said.

"It must only happen when the wind reverses. The pass is just low enough to let the hydrogen and ammonia over."

"You saved my life."

"We saved our lives."

"And with a smashed heel."

"I was scared of dying," he said.

She sniffed. "That's why I woke up with my head in your lap." She went out and set the galley right enough to cook them a scratch meal, then went up front a second to consult the computer. When she came back she was carrying a plastic cylinder. "I had to check to make sure this was safe for you after that shot." She peeled it, revealing a bottle of wine. "To celebrate our being alive."

Halfway through the meal she looked at him without speaking for a long time, then smiled nervously. "I've been wondering how to get you into my bed."

He flushed. "Don't joke."

"I'm not joking. Why do you think I've been looking at you so much these past few days?"

"Please," said Feisal. "I'm serious about you."

"I'm serious, too," she said, and reached for the zipper of his coverall.

He touched her hand gently."What about my leg?"

"You won't notice it."

She was right. And they hadn't noticed Ruby-rise either. Afterwards they lay next to each other and finished the wine, talking about their future together, the possibilities of Feisal's film.

They touched their glasses.

"*The phoenix riddle hath more wit by us,*" he quoted.

"*We two being one, are it,*" she came in.

But outside, forgotten for the moment, the real answers to the phoenix riddle wheeled and soared above the lander, the newborn phoenixes who knew no riddle, and whose only answer was to fly forever between two atmospheres, to mate and fall in flames. To rise, to rise.

Art by Carl Lundgren

Upcoming Issues

A smile in one culture might be interpreted as invitation to dinner in another — with the guest as the main course. It's all a question of semantics and proper communications. In fact, you might say communications is the theme of our next issue. Have you ever tried to really communicate with someone only to discover you weren't on the same wavelength? That's the problem the protagonist in George Zebrowski's "Bridge of Silence" faces in the next issue — only his job is to converse with an alien (our next cover story). Fathers and sons find they have a great deal in common in Rory Harper's "Regeneration," but it isn't what you might expect. A simple salvage operation on a desolate planet becomes more than the hero in Joel Henry Sherman's "Finder's Fee" bargained for as he comes face-to-face with something he did in the war. The relationship between a teacher and student turns out to be very special in "Second Best Friend" by Elizabeth Anne Hull. And a little girl finds a new use for rock and roll music in Greg Cox's "Almost 11." Plus we'll have our second Home System short story, our regular columns and another glimpse into the mind of our alien publisher. And for our upcoming issues we have stories by Frederik Pohl, Charles L. Grant, Connie Willis and many many more.

Aborigines

(*Continued from* PAGE 4)

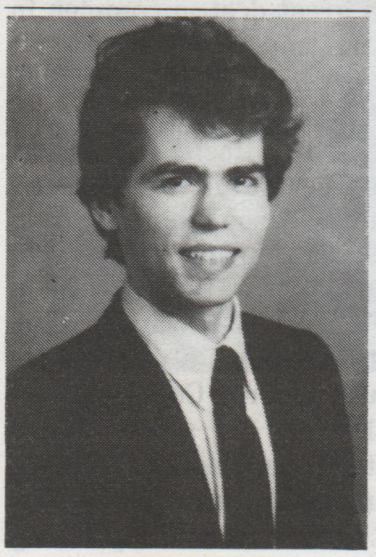
the subject of the short story "Fixing Larx," by Lou Fisher.

Fisher is the author of six novels. His latest, *The Blue Ice Pilot* (Warner Books) came out in June.

Lou Fisher

Fisher works full-time for a computer company and plays tennis year-round. This causes him to write "in spurts," he says. He is presently trying to turn those spurts into a steady stream.

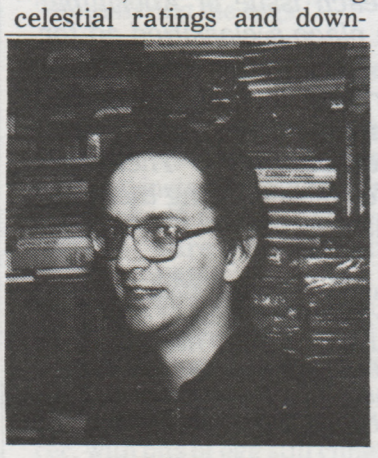
John Moore treats us to some invisible espionage in "Sight Unseen." Moore studied chemical engineering at the University of Houston and then worked for Exxon doing synthetic fuels research and polymer analysis.



John Moore

Moore apparently hasn't had enough of easy college courses; he says he plans to return to school to study genetic engineering. Besides writing sf, Moore likes to eat out and dance to rock and roll in his spare time.

Darrell Schweitzer, *Aboriginal SF's* book reviewer, will be offering celestial ratings and down-to-earth criticism of sf's most important new works. See his review of Theodore Sturgeon's posthumous novel, *Godbody,* beginning on page 5.



Darrell Schweitzer

Schweitzer is a noted author of over seventy stories in sf publications, and some of the best of them can be found in *Tom O'Bedlam's Night Out and Other Strange Excursions*. His latest novel, *Conan the Deliverer* (Tor Books), is forthcoming next year.

Between 1977 and 1986 Schweitzer was assistant editor on *Isaac Asimov's Science Fiction Magazine* and then on *Amazing Science Fiction*.

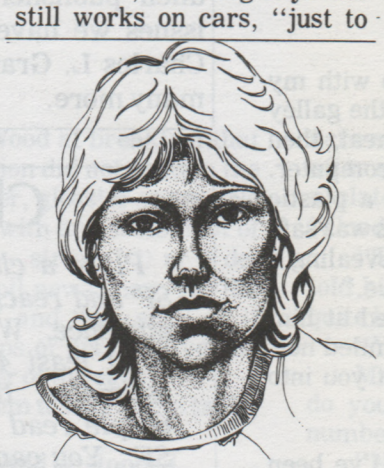
He reviews for *The Philadelphia Inquirer* and *The Cleveland Plain Dealer* and is a columnist for *Science Fiction Review* and *Fantasy Review*.

Our movie critic, Jessie Horsting, spent five years as an editor for *Fantastic Films* magazine and then became a full-time writer, columnist and critic for magazines such as *American Cinematographer, Cinefantastique* and *Profiles,* among others.

Jessie Horsting

She is currently a consultant for MGM studios, the author of *Stephen King: At The Movies,* and is finishing a novel, *Tricks,* with writer Steve Boyett and a novella for a forthcoming anthology.

Once a full-time auto mechanic, Horsting says she still works on cars, "just to keep a little perspective on things."



Carol Ann Gaffney
a self portrait

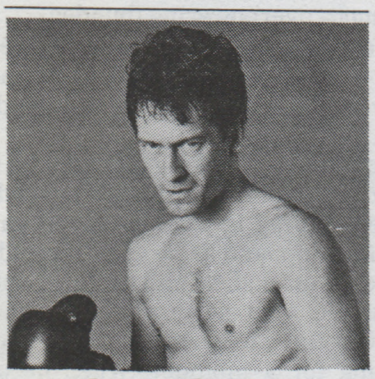
Cover artist Cortney Skinner is a full-time illustrator and a history buff who admits to an "inability to live in the present."

For the cover art, his agent, Gin O'Leary, another Boston-area resident, served as model.

Carol Ann Gaffney, artist for "Fixing Larx" attended the Butera School of Art in Boston and is currently attending the University of Massachusetts in Boston.

She lists her employment as "sporadic" and her hobbies include "reading till my eyes fall out."

Larry Blamire, the artist for "Prior Restraint," was educated at the Art Institute of Boston, and is an actor, director and playwright in addition to being an illustrator.



Larry Blamire

Blamire says his ultimate desire in life would be to "produce all my plays and make movies."

Charles Lang, artist for "Sight Unseen," splits his time between illustrating and working as a technician for an electronics firm. As hobbies he collects paperbacks for their cover art and builds Japanese robot models.

This issue's centerfold illustrating "The Phoenix Riddle" is the work of Bob Eggleton, who also did the illustrations of three of the planets in Hal Clement's "The Home System."

Camera-shy Charles Lang's cat

Bob is an astronomical and sf artist living in Rhode Island. He is currently doing art for the World Science Fiction convention book by the New England Science Fiction Association and is co-editing a book with fellow astronomical artist Ron Miller.

Other aborigines, or, As the Worlds Turn:

Frederik Pohl was in the Soviet Union for a week-long conference of writers in late June and found Russian writers all abuzz about Chernobyl.

Bob Eggleton

He said the Russian writers noted that a lot had been written about the heroic deeds of those who fought the fire at the nuclear power plant, but not much about what caused the accident. Pohl is currently writing a novel about Chernobyl, but the science in it won't be fiction.

He has just finished *Annals of the Heechee* (Ballantine), a sequel to three other novels that began with the Hugo-award-winning *Gateway*. It is due out about February.

A short story by Pohl will be featured in an upcoming issue of *Aboriginal SF*.

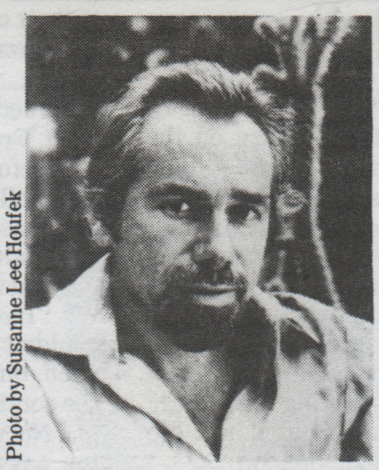


Photo by Susanne Lee Houfek

Robert Silverberg

Gregory Benford is having a much better year than he did in 1985. Last year, within a space of three months, Benford was in a serious automobile accident, felt a bullet whiz by his head as he jogged along the beach near his California home and found himself in the middle of a drug deal gone bad, and suffered a burst appendix.

Since then, Benford has recovered, and traveled to India and Japan without serious incident.

The author of the Nebula-award-winning novel *Timescape* has two new books out this year, a novel with David Brin, *Heart of the Comet,* (Bantam) and his first collection of short stories, *In Alien Flesh* (Tor Books).

He is currently working on a three-novel sequence for Bantam that is a follow up to the novels *In the Ocean of Night* and *Across the Sea of Suns,* where human beings live in a society completely dominated by intelligent machines.

Robert Silverberg's next book, due out this fall, is *Star of Gypsies* (Donald I. Fine) a "somewhat lighthearted novel of the future," he says.

The prolific, award-winning author is now working on a rather unusual project, an "autobiographical anthology and textbook" to be published next spring and titled *Robert Silverberg's Worlds of Wonder*.

"It's an anthology of the stories I learned most from when I was setting out to be a writer," he says. The stories will be accompanied by essay commentary and the book will include a long biographical essay as well.

Alan Dean Foster's latest accomplishments include building his own studio and bench pressing 290 pounds.

"I took up weights when I was 36. That was three and a half years ago. It was that or golf. I was curious to see if I could do something with my body (at that age), and it really worked!"

Foster's latest blockbuster success, his novelization of the screenplay for the movie *Aliens,* will soon be followed by a spate of novels, *Into the Out Of* (Warner Books), *Time of the Transference* (Warner Books) in the *Spellsinger* series, *Deluge Drivers,* (Del Ray), the conclusion of the *Icerigger* trilogy, and *Malendipity* (Berkeley).

In July, Greg Bear was celebrating the rise of his novel *Eon* (Tor) to number 11 on Waldenbooks' list of bestselling mass market paperbacks.

He was anticipating great things for his novel *Blood Music* (Berkeley Ace) which has been nominated for a 1986 Hugo award, after winning a 1984 Hugo for best novellette.

And he was anticipating a celebration around August 30, when he and his wife, Astrid, were expecting their first child.

Science fiction patriarch Clifford Simak is in poor health and not doing any writing these days. His latest book, *Highway of Eternity* (Del Ray), was released in June.

George Zebrowski, author of the novel *Macrolife,* has just completed two projects due out this fall: He was the editor of *Nebula Awards 21,* and his short story "The Idea Trap" will appear in Terry Carr's *Universe 16* (Doubleday).

Photo by Jay Kay Klein

George Zebrowski

His story "Stooges" was in a recent *Twilight Zone Magazine*. Look for his short story "Bridge of Silence" to appear in the December/January issue of *Aboriginal SF*.

We welcome the contribution of biographical information (your latest doings) from writers, artists, agents, editors, publishers and other science fiction professionals for use in this column (photos appreciated, we will return them). We will also try to satisfy any reader's request for current information on a particular author.

Fixing Larx

(Continued from PAGE *11)*

thing. The laser probe is painless and as quick as a wink. *Pttt,* and it's gone."

"Just like that," said Matthew.

"All for the best. It's just a robot, they come and go."

"I suppose they do," Matthew said, and walked over to where Larx was waiting.

In the store's bright lights, Larx seemed a match for the old blue sweater, himself worn and faded, standing askew to favor the leg that had been giving him trouble. He swiveled toward Matthew and there was a delay while he appeared to search through all of his accumulated memory to create a feeling. "I'm a bit uneasy, sir," he said at last.

Matthew turned aside. From there he could see the unmarked door across the aisles; behind it the laser gun and probably a pile of scrap. But this was a moment to be realistic. The work around the house had to get done. Everyday mistakes by a robot could not be tolerated. The breakage, the time wasted, the constant apprehension . . . He turned back and straightened Larx's sweater around the shoulders. "Don't worry, Larx," he said. "Didn't I get a check-up myself last month?"

"Correct and correct."

"And wasn't it . . . You're a good robot, Larx."

"Thank you, sir."

"The best."

"If you say so, sir. Yes, I often try to please. Let me know when they're ready for me, and we'll soon be back home."

"Sure," Matthew said, glancing at Nancy.

She nodded. She took a step. She nodded again. Matthew looked away from her, to look back at Larx, but instead his head dropped; he rubbed a finger under his nose and thought first about nothing and then about how lucky he was to have met Nancy at just this time, and so the lost blind moments passed . . . Until it occurred to him in a sudden stab of panic that he had managed to mumble, "Go ahead" — and he came out of it fast, fixed with the idea to scream.

Larx was gone. Gone!

But that couldn't be, Matthew thought.

He had meant, he told himself desperately, to take Larx by the hand, to stand with him against the probe, to reassure him, even falsely, that everything was all right. Just a routine service call, he was going to say. A bit of oil. A replacement for the knee chip. Whatever. He was going to try, above all, to leave a smile in the circuits. But there he was, having done none of it, having only looked to the floor, having deserted Larx at the end and given him to junk. But there he was, with a pain in his stomach.

And his hands were shaking.

* * *

A small, ugly weapon, a ruby laser, came spitting toward his robot. At that point, of course, Larx knew; Matthew saw the head swivel rapidly from side to side. *Too late,* he thought. He burst through the stacked cartons and crates into the center of the back room, expecting at any moment to hear the final *pttt* of the probe. Instead Larx said, "Sir!" and reached for him and his knee gave out and the narrow red beam passed over his head into the wall and Matthew grabbed him and fell over him and held up his hand to Nancy who was setting up for another try.

"We don't need that," Matthew said, puffing for breath. "We're just out shopping for a new bicycle."

Larx sat up. "Indeed, sir — a bicycle?"

"A slow one," Matthew told him crisply.

The Reel Stuff

(Continued from PAGE *6)*

(House) is slated as producer, though no director had been announced at this writing.

Bill Gibson's Hugo-winning *Neuromancer* was scooped up for $100,000 by New York's famed plastic surgeon, Dr. Victor Rosenberg, at the behest of his wife, Deborah, and two L.A. locals, Jeffrey Kinart and Ashley Tyler. You'll be hearing a lot about Kinart and Tyler and their long, strange story, which is already being considered as fodder for a network series — Kinart and Tyler's story, not *Neuromancer*. Kinart and Tyler were working as cabana boys at the Beverly Hills Hotel when they decided to form Cabana Boys Productions in order to produce a sequel to *Buckaroo Banzai,* their favorite movie. No one took them seriously, though they did manage to finagle meetings with some of *Buckaroo's* principals. *Buckaroo* producer Neil Canton and Gladden Entertainment chief David Begelman (who retains the rights to BB) shot them down. Canton said, "I don't want to be involved with plastic surgeons and lifeguards."

The Cabana Boys, meanwhile, had befriended the Rosenbergs when they were guests at the Beverly Hills Hotel, then convinced the wealthy couple to purchase the rights to a different property, *Neuromancer*. They have since been knocking on doors in Hollywood trying to raise the capital or interest a studio in the proposed $20 million production. Word around town is that the Cabana Boys production endeavors have been a comedy of errors and naivete — but what they lack in expertise they are making up for in showmanship. The Boys will be featured in *People, Us,* and possibly on the David Letterman show in the future, and my bet is that they'll make a movie about the Cabana Boys before *Neuromancer* ever gets off the ground. This is Hollywood — what could be more natural?

Tied up in *Reanimator*

Getting ready for the *Underworld*

But the real story for most fans is Robert Heinlein's return to the screen after several frustrating years of turnarounds and passes on his classic properties. *Tunnel In The Sky* is at Columbia after knocking around the studios for a few years and is, in the vernacular, being developed. Unfortunately, "in development" is one of those fuzzy-edged phrases that can mean everything and nothing when mouthed over chicken salad and mineral water in Beverly Hills. *Indiana Jones III* was still in development early this year, but you can bet dollars to donuts it'll get made. On the other hand, Alfred Bester's *The Stars My Destination* has been in the limbo of development for years, as has Arthur C. Clarke's *Childhood's End* and Asimov's *I, Robot,* none of which promise to get into production anytime soon. However, this time it looks like Heinlein's story is going to go. He and Tim Curren are collaborating on a script for producer Ted Ravinett. Though Heinlein's health has not been good in recent years, he may see the project on screen by late '87.

Other genre bestsellers on the slates?

John Updike's *The Witches of Eastwick,* with Jack Nicholson cast as the irreverent Daryl Van Horne, and directed by *Road Warrior's* George Miller.

Clarke's *Songs of Distant Earth* has been optioned by mysterious forces and, if you like this kind of thing, V.C. Andrew's *Flowers in the Attic* and *Petals in the Wind* have both been picked up for features.

The long-standing tradition of studios snapping up bestsellers for film projects — Margaret Mitchell's *Gone With The Wind* started the juggernaut rolling — is worth a column in itself. There's not enough space this installment, but in the future I'll explain why they love the novels and what makes a good story go bad.

Short Takes and Small Screams: SFTV

CBS was deliriously happy about the overnight ratings of "The Wizard of Elm Street," the David Rappaport *(Time Bandits)* vehicle about a special toymaker with a dark past — look for it in the fall schedule along with possible slots for *Starman, The Fog,* and an unnamed SF series, as well as the return of *The Twilight Zone* for a second season in a new timeslot, Saturday nights at ten.

After putting *Twilight Zone* on hiatus for a few weeks, Harvey Shepard stepped down as CBS program head and was replaced by Kim LeMasters, whom executive story consultant Alan Brennart describes as having a greater "rapport" for the series than Shepard. Returning production executives, with a little reshuffling, are: Phil Deguere, executive producer; Alan Brennart, executive story consultant; Rockne O'Bannon, story consultant; George R.R. Martin, story editor and staff writer; with the remaining staff positions filled by Mike Cassut, Martin Pascow and Rebecca Parr.

No one at CBS will confirm any move to rehire Harlan Ellison as creative consultant after he resigned last year in a censorship flack over his script "Nackles," based on the Donald Westlake story. Deguere wants Ellison back — but the decision rests in the hands of CBS Standards and Practices NY execs who must meet Ellison's demand to have "Nackles" aired as written. The controversial twelve-minute script is, by all reports and on my reading, a controversy only in the mind of Alice Henderson, the S and P exec who nixed the show a day before it went into production last winter.

The *Star Trek III* cast relaxes between takes

Reader's Service

In cooperation with The Towne Book Fair, which celebrates its 25th anniversary this year, *Aboriginal SF* hopes to provide its readers a special service. The service will provide a means for our readers to obtain copies of books they see reviewed or advertised in the magazine. We are providing this service because many of our readers do not live near bookstores which carry a large line of science fiction and may find it difficult to obtain copies of books they might be interested in. Please allow six to eight weeks for delivery and please include $0.75 to cover postage and handling for each book ordered. In this issue, the following books have been reviewed or advertised:

Godbody by Theodore Sturgeon	$14.95
The Invaders Plan by L. Ron Hubbard	$18.95
Tales of the Quintana Roo by James Tiptree, Jr.	$11.95
Beyond the Safe Zone by Robert Silverberg	$18.95
The People Could Fly by Virginia Hamilton	$12.95
And the Lurid Glare of the Comet by Brian Aldiss	$13.50
Science Fiction, Fantasy and Weird Fiction Magazines by Marshall Tymm and Mike Ashley	$95.00
Marooned in Real Time by Vernor Vinge	$17.95

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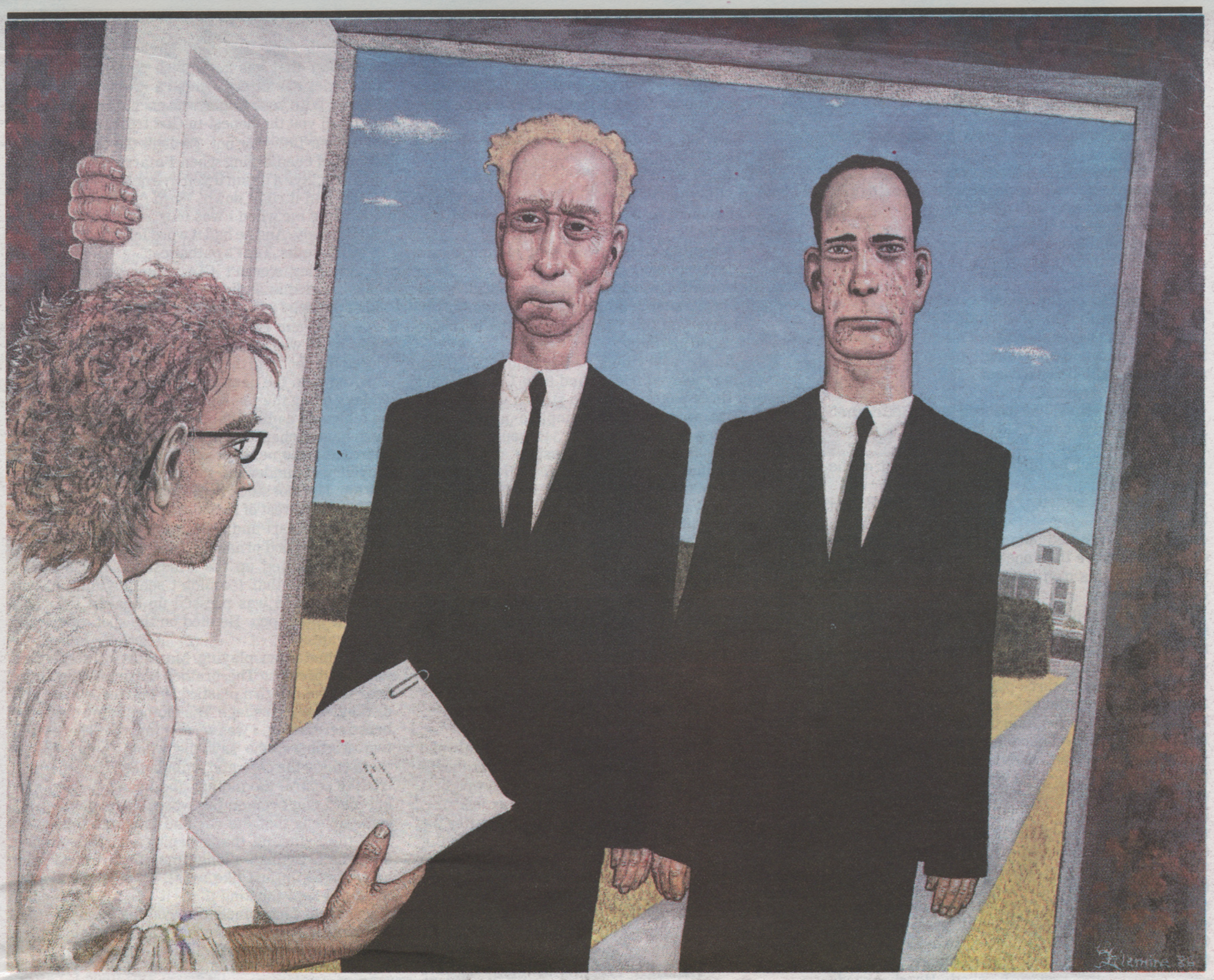
Sight Unseen

By John Moore

They came for Grogan in the middle of the night and it scared the hell out of him. There were no lights, just the unlocking of his cell, the cell that had been his home for the last eight months, and the burly guards seized him by the arms and hustled him down the dark corridors, not stopping at any of the checkpoints. By the time they passed out of the prison proper into the guards' barracks, still

(Continued to PAGE *22)*



Prior Restraint

By Orson Scott Card

I met Doc Murphy in a writing class taught by a mad Frenchman at the University of Utah in Salt Lake City. I had just quit my job as a coat-and-tie editor at a conservative family magazine, and I was having a little trouble getting used to being a slob student again. Of a shaggy lot, Doc was the shaggiest and I was prepared to be annoyed by him and ignore his opinions. But his opinions were not to be ignored At first because of what he did to me. And then, at last, because of what had been done to him. It has shaped me; his past looms over me whenever I sit down to write.

Armand the teacher, who had not improved on his French accent by replacing it with Bostonian, looked puzzled as he held up my story before the class."This is commercially viable," he said. "It is also crap. What else can I say?"

It was Doc who said it. Nail in one hand, hammer in the other, he crucified me and the story. Considering that I had already decided not to pay attention to him, and considering how arrogant I was in the lofty position of being the one student who had actually sold a novel, it is surprising to me that I listened to him. But underneath the almost angry attack on my work was something else: A basic respect, I think, for what a good writer should be. And for that small hint in my work that a good writer might be hiding somewhere in me.

So I listened. And I learned. And gradually, as the Frenchman got crazier and crazier, I turned to Doc to learn how to write. Shaggy though he was, he had a far crisper mind than anyone I had ever known in a business suit.

We began to meet outside class. My wife had left me two years before, so I had plenty of free time and a pretty large rented house to sprawl in; we drank or read or talked, in front of a fire or over Doc's convincing veal parmesan or out chopping down an insidious vine that wanted to take over the world starting in my back yard. For the first time since Denae had gone I felt at home in my house—Doc seemed to know by instinct what parts of the house held the wrong memories, and he soon balanced them by making me feel comfortable in them again.

Or uncomfortable. Doc didn't always say nice things.

"I can see why your wife left you," he said once.

"You don't think I'm good in bed, either?" (This was a joke— neither Doc nor I had any unusual sexual predilections.)

"You have a neanderthal way of dealing with people, that's all. If they aren't going where you want them to go, club 'em a good one and drag 'em away."

It was irritating. I didn't like thinking about my wife. We had only been married three years, and not good years either, but in my own way I had loved her and I missed her a great deal and I hadn't wanted her to go when she left. I didn't like having my nose rubbed in it. "I don't recall clubbing *you*."

He just smiled. And, of course,I immediately thought back over the conversation and realized that he was right. I hated his goddam smile.

"OK," I said, "you're the one with long hair in the land of the last surviving crew cuts. Tell me why you like 'Swap' Morris."

"I don't like Morris. I think Morris is a whore selling someone else's freedom to win votes."

And I *was* confused, then. I had been excoriating good old "Swap" Morris, Davis County Commissioner, for having fired the head librarian in the county because she had dared to stock a "pornographic" book despite his objections. Morris showed every sign of being illiterate, fascist, and extremely popular, and I would gladly have hit the horse at his lynching.

"So you don't like Morris either—what did I say wrong?"

"Censorship is never excusable for any reason, says you."

"You *like* censorship?"

And then the half-serious banter turned completely serious. Suddenly he wouldn't look at me. Suddenly he only had eyes for the fire, and I saw the flames dancing in tears resting on his lower eyelids, and I realized again that with Doc I was out of my depth completely.

"No," he said. "No, I don't *like* it."

And then a lot of silence until he finally drank two full glasses of wine, just like that, and went out to drive home; he lived up Emigration Canyon at the end of a winding, narrow road, and I was afraid he was too drunk, but he only said to me at the door, "I'm not drunk. It takes half a gallon of wine just to get up to normal after an hour with you, you're so damn sober."

One weekend he even took me to work with him. Doc made his living in Nevada. We left Salt Lake City on Friday afternoon and drove to Wendover, the first town over the border. I expected him to be an employee of the casino we stopped at. But he didn't punch in, just left his name with a guy; and then he sat in a corner with me and waited.

"Don't you have to work?" I asked.

"I'm working," he said.

"I used to work just the same way, but I got fired."

"I've got to wait my turn for a table. I told you I made my living with poker."

And it finally dawned on me that he was a freelance professional — a player — a cardshark.

There were four guys named Doc there that night. Doc Murphy was the third one called to a table. He played quietly, and lost steadily but lightly for two hours. Then, suddenly, in four hands he made back everything he had lost and added nearly fifteen hundred dollars to it. Then he made his apologies after a decent number of losing hands and we drove back to Salt Lake.

"Usually I have to play again on Saturday night," he told me. Then he grinned. "Tonight I was

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Prior Restraint

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lucky. There was an idiot who thought he knew poker."

I remembered the old saw: Never eat at a place called Mom's, never play poker with a man named Doc, and never sleep with a woman who's got more troubles than you. Pure truth. Doc memorized the deck, knew all the odds by heart, and it was a rare poker face that Doc couldn't eventually see through.

At the end of the quarter, though, it finally dawned on me that in all the time we were in class together, I had never seen one of his own stories. He hadn't written a damn thing. And there was his grade on the bulletin board — *A*.

I talked to Armand.

"Oh, Doc writes," he assured me. "Better than you do, and you got an *A*. God knows how, you don't have the talent for it."

"Why doesn't he turn it in for the rest of the class to read?"

Armand shrugged. "Why should he? Pearls before swine."

Still it irritated me. After watching Doc disembowel more than one writer, I didn't think it was fair that his own work was never put on the chopping block.

The next quarter he turned up in a graduate seminar with me, and I asked him. He laughed and told me to forget it. I laughed back and told him I wouldn't. I wanted to read his stuff. So the next week he gave me a three-page manuscript. It was an unfinished fragment of a story about a man who honestly thought his wife had left him even though he went home to find her there every night. It was some of the best writing I've ever read in my life. No matter how you measure it. The stuff was clear enough and exciting enough that any moron who likes Harold Robbins could have enjoyed it. But the style was rich enough and the matter of it deep enough even in a few pages that it made most other "great" writers look like chicken farmers. I reread the fragment five times just to make sure I got it all. The first time I had thought it was metaphorically about me. The third time I knew it was about God. The fifth time I knew it was about everything that mattered, and I wanted to read more.

"Where's the rest?" I asked. He shrugged. "That's it," he said.

"It doesn't feel finished."

"It isn't."

"Well, finish it! Doc, you could sell this anywhere, even the *New Yorker*. For them you probably don't even *have* to finish it."

"Even the *New Yorker*. Golly."

"I can't believe you think you're too good for *anybody,* Doc. Finish it. I want to know how it ends."

He shook his head. "That's all there is. That's all there ever will be."

And that was the end of the discussion.

But from time to time he'd show me another fragment. Always better than the one before. And in the meantime we became closer, not because he was such a good writer — I'm not so self-effacing I like hanging around with people who can write me under the table — but because he was Doc Murphy. We found every decent place to get a beer in Salt Lake City — not a particular time-consuming activity. We saw three good movies and another dozen that were so bad they were fun to watch. He taught me to play poker well enough that I broke even every weekend. He put up with my succession of girlfriends and prophesied that I would probably end up married again. "You're just weak willed enough to try to make a go of it," he cheerfully told me.

At last, when I had long since given up asking, he told me why he never finished anything.

I was two and a half beers down, and he was drinking a hideous mix of Tab and tomato juice that he drank whenever he wanted to punish himself for his sins, on the theory that it was even worse than the Hindu practice of drinking your own piss. I had just got a story back from a magazine I had been sure would buy it. I was thinking of giving it up. He laughed at me.

"I'm serious," I said.

"Nobody who's any good at all needs to give up writing."

"Look who's talking. The king of the determined writers." He looked angry. "You're a paraplegic making fun of a one-legged man," he said.

"I'm sick of it."

"Quit then. Makes no difference. Leave the field to the hacks. You're probably a hack, too."

Doc hadn't been drinking anything to make him surly, not drunk-surly, anyway. "Hey, Doc, I'm asking for encouragement."

"If you need encouragement, you don't deserve it. There's only one way a good writer can be stopped."

"Don't tell me you have a selective writer's block. Against endings."

"Writer's block? Jesus, I've never been blocked in my life. Blocks are what happen when you're not good enough to write the thing you know you have to write."

I was getting angry. "And *you,* of course, are always good enough."

He leaned forward, looked at me in the eyes. "I'm the best writer in the English language."

"I'll give you this much. You're the best who never finished anything."

"I finish everything," he said. "I finish everything, beloved friend, and then I burn all but the first three pages. I finish a story a week, sometimes. I've written three complete novels, four plays. I even did a screenplay. It would've made millions of dollars and been a classic."

"Says who?"

"Says—never mind who says. It was bought, it was cast, it was ready for filming. It had a budget of thirty million. The studio believed in it. Only intelligent thing I've ever heard of them doing."

I couldn't believe it. "You're joking."

"If I'm joking, who's laughing? It's true."

I'd never seen him looked so poisoned, so pained. It was true, if I knew Doc Murphy, and I think I did. Do. "Why?" I asked.

"The Censorship Board."

"What? There's no such thing in America."

He laughed. "Not full-time anyway."

"Who the hell is the Censorship Board?"

He told me:

When I was twenty-two I lived on a rural road in Oregon, he said, outside of Portland. Mailboxes out on the road. I was writing, I was a playwright, I thought there'd be a career in that; I was just starting to try fiction. I went out one morning after the mailman had gone by. It was drizzling slightly. But I didn't much care. There was an envelope there from my Hollywood agent. It was a contract. Not an option—a sale. A hundred thousand dollars. It had just occurred to me that I was getting wet and I ought to go in when two men came out of the bushes—yeah, I know, I guess they go for dramatic entrances. They were in business suits. God, I hate men who wear business suits. The one guy just held out his hand. He said, "Give it to me now and save yourself a lot of trouble." Give it to him? I told him what I thought of his suggestion. They looked like the mafia, or like a comic parody of the mafia, actually.

They were about the same height, and they seemed almost to be the same person, right down to a duplicate glint of fierceness in the eyes; but then I realized that my first impression had been deceptive. One was blond, one dark-haired; the blond had a slightly receding chin that gave his face a meek look from the nose down; the dark one had once had a bad skin problem and his neck was treeish, giving him an air of stupidity, as if a face had been pasted on the front of the neck with no room for a head at all. Not mafia at all. Ordinary people.

Except the eyes. That glint in the eyes was not false, and that was what had made me see them wrong at first. Those eyes had seen people weep, and had cared, and had hurt them again anyway. It's a look that human eyes should never have.

"It's just the *contract,* for Christ's sake," I told them, but the dark one with acne scars only told me again to hand it over.

By now, though, my first fear had passed; they weren't armed, and so I might be able to get rid of them without violence. I started back to the house. They followed me.

"What do you want my contract for?" I asked.

"That film will never be made," says Meek, the blond one with the missing chin. "We won't allow it to be made."

I'm thinking who writes their dialogue for them, do they crib it from Fenimore Cooper? "Their hundred thousand dollars says they want to try. I want them to."

"You'll never get the money, Murphy. And this contract and that screenplay will pass out of existence within the next four days. I promise you that."

I ask him, "What are you, a critic?"

"Close enough."

By now I was inside the door and they were on the other side of the threshold. I should have closed the door, probably, but I'm a gambler. I had to stay in this time because I had to know what kind of hand they had. "Plan to take it by force?" I asked.

"By inevitability," Tree says. And then he says, "You see, Mr. Murphy, you're a dangerous man; with your IBM Self-Correcting Selectric II typewriter that has a sluggish return so that you sometimes get letters printed a few spaces in from the end. With your father who once said to you, 'Billy, to tell you the honest-to-God truth, I don't know if I'm your father or not. I wasn't the only guy your Mom had been seeing when I married her, so I really don't give a damn if you live or die."

He had it right down. *Word for word,* what my father told me when I was four years old. I'd never told anybody. And he had it word for word.

CIA, Jesus. That's pathetic.

No, they weren't CIA. They just wanted to make sure that I didn't write. Or rather, that I didn't publish.

I told them I wasn't interested in their suggestions. And I was right—they weren't muscle types. I closed the door and they just went away.

And then the next day as I was driving my old Galaxy along the road, under the speed limit, a boy on a bicycle came right out in front of me. I didn't even have a chance to brake. One second he wasn't there, and the next second he was. I hit him. The bicycle went under the car, but he mostly came up the top. His foot stuck in the bumper, jammed in by the bike. The rest of him slid up over the hood, pulling his hip apart and separating his spine in three places. The hood ornament disemboweled him and the blood flowed up the windshield like a heavy rainstorm, so that I couldn't see anything except his face, which was pressed up against the glass with the eyes open. He died on the spot, of course. And I wanted to.

He had been playing Martians or something with his brother. The brother was standing there near the road with a plastic ray gun in his hand and a stupid look on his face. His mother came out of the house screaming. I was screaming, too. There were two neighbors who saw the whole thing. One of them called the cops and ambulance. The other one tried to control the mother and keep her from killing me. I don't remember where I was going. All I remember is that the car had taken an unusually long time starting that morning. Another minute and a half, I think—a long time, to start a car. If it had started up just like usual, I wouldn't have hit the kid. I kept thinking that—it was all just a coincidence that I happened to be coming by just at that moment. A half-second sooner and he would have seen me and swerved. A half-second later and I would have seen him. Just coincidence. The only reason the boy's father didn't kill me when he came home ten minutes later was because I was crying so damn hard. It never went to court because the neighbors testified that I hadn't a chance to stop, and the police investigator determined that I hadn't been speeding. Not even negligence. Just terrible, terrible chance.

I read the article in the paper. The boy was only nine, but he was taking special classes at school and was very bright, a good kid, ran a paper route and always took care of his brothers and sisters. A real tear-jerker for the consumption of the subscribers. I thought of killing myself. And then the men in the business suits came back. They had four copies of my script, my screenplay. Four copies is all I had ever made—the original was in my file.

"You see, Mr. Murphy, we have every copy of the screenplay. You will give us the original."

I wasn't in the mood for this. I started closing the door.

"You have so much taste," I said. I didn't care how they got the script, not then. I just wanted to find a way to sleep until when I woke up the boy would still be alive.

They pushed the door open and came in. "You see, Mr. Murphy, until we altered your car yesterday, your path and the boy's never did intersect. We had to try four times to get the timing right, but we finally made it. It's the nice thing about time travel. If you blow it, you can always go back and get it right the next time."

I couldn't believe anyone would want to take credit for the boy's death. "What for?" I asked.

And they told me. Seems the boy was even more talented than anyone thought. He was going to grow up and be a writer. A journalist and critic. And he was going to cause a lot of problems for a particular government some forty years down the line. He was especially going to write three books that would change the whole way of thinking of a large number of people. The wrong way.

"We're all writers ourselves," Meek says to me. "It shouldn't surprise you that we take our writing very seriously. More seriously than *you* do. Writers, the good writers, can change people. And some of the changes aren't very good. By killing that boy yesterday, you see, you stopped a bloody civil war some sixty years from now. We've al-

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Prior Restraint

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ready checked and there are some unpleasant side effects, but nothing that can't be coped with. Saved seven million lives. You shouldn't feel bad about it."

I remembered the things they had known about me. Things that nobody could have known. I felt stupid because I began to believe they might be for real. I felt afraid because they were calm when they talked of the boy's death. I asked, "Where do I come in? Why me?"

"Oh, it's simple. You're a very good writer. Destined to be the best of your age. Fiction. And this screenplay. In three hundred years they're going to compare you to Shakespeare and the poor old bard will lose. The trouble is, Murphy, you're a godawful hedonist and a pessimist to boot, and if we can just keep you from publishing anything, the whole artistic mood of two centuries will be brightened considerably. Not to mention the prevention of a famine in seventy years. History makes strange connections, Murphy, and you're at the heart of a lot of suffering. If you never publish, the world will be a much better place for everyone."

You weren't there, you didn't hear them. You didn't see them, sitting on my couch, legs crossed, nodding, gesturing like they were saying the most natural thing in the world. From them I learned how to write genuine insanity. Not somebody frothing at the mouth; just somebody sitting there like a good friend, saying impossible things, cruel things, and smiling and getting excited and — Jesus, you don't know. Because I believed them. They knew, you see. And they were *too* insane, even a madman could have come up with a better hoax than that. And I'm making it sound as if I believed them logically, but I didn't, I don't think I can persuade you, either, but trust me—if I know when a man is bluffing or telling the truth, and I do, these two were not bluffing. A child had died, and they knew how many times I had turned the key in the ignition. And there was truth in those terrible eyes when Meek said, "If you willingly refrain from publishing, you will be allowed to live. If you refuse, then you will die within three days. Another writer will kill you—accidently, of course. We only have authority to work through authors."

I asked them why. The answer made me laugh. It seems they were from the Authors' Guild. "It's a matter of responsibility. If you refuse to take responsibility for the future consequences of your acts, we'll have to give the responsibility to somebody else."

And so I asked them why they didn't just kill me in the first place instead of wasting time talking to me.

It was Tree who answered, and the bastard was crying, and he says to me, "Because we love you. We love everything you write. We've learned everything we know about writing from you. And we'll lose it if you die."

They tried to console me by telling me what good company I was in. Thomas Hardy — they made him give up novels and stick to poetry which nobody read and so it was safe. Meek tells me, "Hemingway decided to kill himself instead of waiting for us to do it. And there are some others who only had to refrain from writing a particular book. It hurt them, but Fitzgerald was still able to have a decent career with the other books he could write, and Perelman gave it to us in laughs, since he couldn't be allowed to write his real work. We only bother with great writers. Bad writers aren't a threat to anybody."

We struck a sort of bargain. I could go on writing. But after I had finished everything, I had to burn it. All but the first three pages. "If you finish it at all," says Meek, "we'll have a copy of it here. There's a library here that — uh, I guess the easiest way to say it is that it exists outside time. You'll be published, in a way. Just not in your own time. Not for about eight hundred years. But at least you can write. There are others who have to keep their pens completely still. It breaks our hearts, you know."

I knew all about broken hearts, yes sir, I knew all about it. I burned all but the first three pages.

There's only one reason for a writer to quit writing, and that's when the Censorship Board gets to him. Anybody else who quits is just a gold-plated jackass. "Swap" Morris doesn't even know what real censorship is. It doesn't happen in libraries. It happens on the hoods of cars. So go on, become a real estate broker, sell insurance, follow Santa Claus and clean up the reindeer poo, I don't give a damn. But if you give up something that I will never have, I'm through with you. There's nothing in you for me.

* * *

So I write. And Doc reads it and tears it to pieces; everything except this. This he'll never see. This he'd probably kill me for, but what the hell? It'll never get published. No, no I'm too vain. You're reading it, aren't you? See how I put my ego on the line? If I'm really a good enough writer, if my work is important enough to change the world, then a couple of guys in business suits will come make me a proposition I can't refuse, and you won't read this at all, but you are reading it, aren't you? Why am I doing this to myself? Maybe I'm hoping they'll come and give me an excuse to quit writing now, before I find out that I've already written as well as I'm ever going to. But here I thumb my nose at those goddam future critics and they ignore me, they tell exactly what my work is worth.

Or maybe not. Maybe I really *am* good, but my work just happens to have a positive effect, happens not to make any unpleasant waves in the future. Maybe I'm one of the lucky ones who can accomplish something powerful that doesn't need to be censored to protect the future.

Maybe pigs have wings.

Home System

(Continued from PAGE *9)*

nitrogen, water, and heat. The products would be less dense than the reactants even at the same temperature, so they rise and carry clouds and nitrogen back over the oceans at high altitudes. Very little oxygen, ammonia, or hydrogen reach the hemispheres where they were not formed in the free state.

I have not tried to be quantitative about the equilibria involved here. Production by life forms would depend on the rate at which energy is received from Ruby, the photosynthetic efficiency, and the amount of area covered with photosynthetic life. Destruction of the oxygen, hydrogen, and ammonia would depend primarily on concentrations of these gases at the altitudes where they do most of their mixing. Whether a real fire could ever be touched off in some of the lower passes I don't know, but it's an interesting possibility to play with.

I am assuming that the total pressure of Janus's atmosphere at sea level is about 3,500 millibars, or a little more than three and a half times ours (though I am not sure that "sea level" is the same on both sides of the mountains). Away from the barrier range, oxygen partial pressure in the hot hemisphere is about 180 mb. Ammonia partial pressure on the other side is about 120, and free hydrogen about 80.

The second figure means an enormous total of ammonia, since most of the latter will be in solution in the oceans and lakes.

I provide these guesses, which seem intuitively reasonable to me, so that people can start writing stories before the computer-equipped characters come up with their detailed articles.

The hot hemisphere would have life fairly similar to Earth's. There would be photosynthetic plants, catabolic organisms corresponding to animals and fungi, and quite probably symbiotic combinations of the two. The hot day would be surprisingly long (see Figs. 5 and 7); the sun would appear to move very slowly across the sky near the hot hemisphere's noon, but much more rapidly half a year later. The position of the sun at twenty-four equally separated times during the year is given in Table 3 (the intervals are 69.67 hours, if that's not obvious!).

The cold hemisphere also has photosynthetic forms which use Ruby's energy to unsaturate hydronitrogens. The principal product is hydrazine, but products all the way to hydrazoic acid are formed. Catabolic life gets its energy by rehydrogenating these compounds. This gives about one kilocalorie per gram of hydrazine, but close to three and a half per gram of hydrazoic acid — quite comparable to the four kcal per gram we get by oxidizing sucrose to water and carbon dioxide. The oxygen life of the hot hemisphere doesn't have too much of an energy advantage. The presence of azides in the tissues of coldside life forms should add a bit of spice to the life of human explorers.

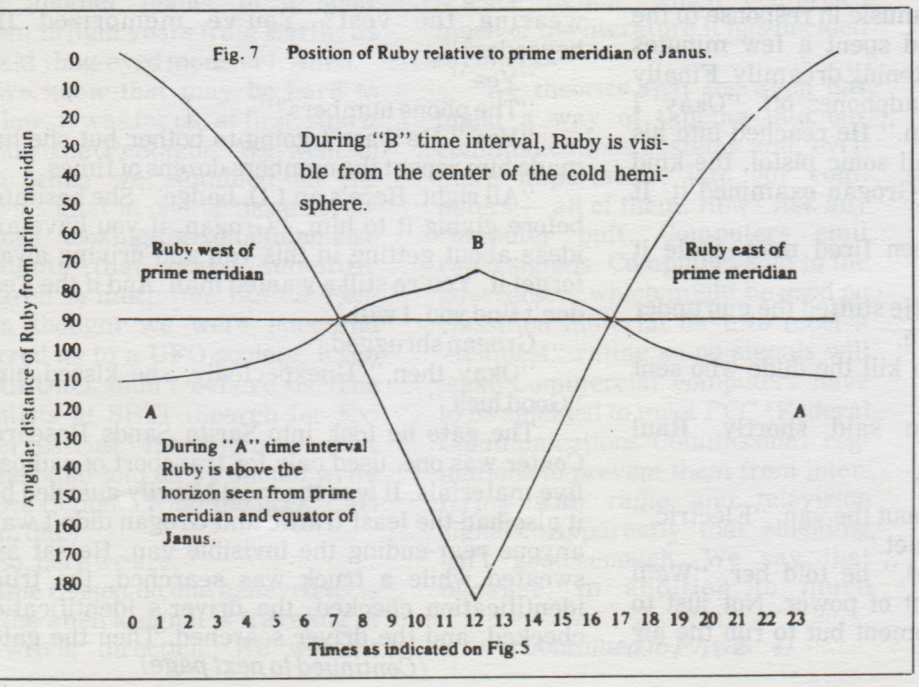
To add one more touch to the biochemistry, there could also be life forms in the barrier mountains which get their energy by oxidizing hydrogen and ammonia to water with atmospheric oxygen. Assuming they could get their minerals from water like Earthly plants, they wouldn't have to eat. Some of the people who like to write sociology-oriented science-fiction stories might enjoy this neighborhood.

To be a little more specific about "hot" and "cold," the noontime temperature in the oxygen hemisphere directly under the sun and away from large bodies of water would be roughly sixty or seventy Celsius; for the other hemisphere under like conditions it would be a little below zero, the freezing point of pure water (but remember the oceans aren't pure water, and neither are the lakes and rivers; they're all saturated with ammonia). Near the boundary mountains the temperature would depend heavily enough on air circulation to be very hard to guess—Earth's meteorology is bad enough. My guess would be uncomfortably hot for any human being during the day, and uncomfortably cold during the night.

Enjoy.

(EDITOR'S NOTE: *Anyone who would like to use The Home System as the basis of a short story is welcome to at your own risk—we reserve the right to return a story not found suitable. If you want to give it a try, send a self-addressed stamped envelope to: Aboriginal SF, P.O. Box 2449, Woburn, MA 01888.)*

Fig. 7 Position of Ruby relative to prime meridian of Janus.



Boomerangs

Okay. This is your chance to let us have it. Following the peculiar laws of gravity and ballistics under which we work, everything we send out comes back to us one way or another, just like the boomerangs used by Australian aborigines. Hence we have decided to call our letter column "Boomerangs." Your assignment, should you choose to accept it, is to fill this space. Needless to say, we reserve the right to edit, ignore or print your missives at will with absolutely no compensation for the authors. Only remember, you have to be really careful how you throw a boomerang so it doesn't bop you on the return. We react equally well to praise and criticism (and only fib a little). So, get out your crayons and have at us.

Sight Unseen

(Continued from PAGE *18)*

without saying a word, he was almost at panic, his head filled with twisted pictures of being beaten to death in an atavistic prison ritual. But they double-timed him straight through the barracks, out a small service hatch in the prison wall, and it wasn't until they stood at the edge of the perimeter fields that one of them finally spoke.

"The sonic nets will be off for five minutes," he said. "You have to be across the field by then. There will be a car. Run across the field and don't stop. The dogs will be right behind."

Grogan looked to the top of the wall, where heat-sensing weapons were tracking him, and shivered. He thought of the dogs, smooth skin and muscle and all teeth, tearing at his face, his testicles. "Run!" said the guard and he ran.

He ran until he thought his heart would burst, out past the perimeter fields and the sonic nets. The dogs caught up with him, he could hear their pants over his own gasping breath. He kept running even after he knew that there was no car, that it was all a cruel joke, that he was going to die out there on the rocky ground. He kept running and never even saw the limo. Lights out, it pulled up right in front of him and he ran full tilt into it. Instantly he picked himself up, fumbled frantically for the door handle, locked himself in just as the first dogs hit the door. Then the limo took off, leaving the dogs and the prison and the last eight months of his life behind.

Pica was in the car. Grogan was scared of her, too.

She was still beautiful, of course, expensively dressed in an evening gown, high heels, smoking some awful imported cigarette. Grogan figured it was just her style, spend the evening at a charity ball, maybe dancing at an exclusive club, then break a man out of prison. But he had no idea why she wanted *him*. She spoke to the driver in Italian and the car accelerated, pushing Grogan back into the Moroccan leather seat. Pica waited in silence until he got his breath back, then said, "Congratulations. You're the first man ever to escape from Valhalla Federal Penitentiary. It cost a fortune in bribes to get you out."

Grogan looked at her uneasily. He said, "Uh ... thanks."

She said, "Tell me about becoming invisible."

Grogan still didn't know why. But he told her.

* * *

The principle of optical invisibility is simple, Grogan explained. Suppose one wanted to hide a missile in a silo. The approach is to make a hologram of the empty silo, put the missile in the silo, and place the hologram over the opening. Unlike a photograph, the hologram by its very nature maintains correct perspective as an observer, via satellite or plane, changes position. The silo appears empty regardless of the angle of view and the missile is thus rendered invisible. Technical difficulties abound but are not insurmountable.

Grogan stopped when he thought Pica's eyes were glazing over. They were sitting in her penthouse, on a couch covered in cream-colored damask. She looked at the circuit diagrams he had drawn and absently offered him a cigarette. He shook his head and she said, "That was the project you were working on? Hiding missiles?"

"Pretty much."

"But that's not all. You came up with a project of your own."

"Well, I extended the idea to a moving vehicle."

"And you used your idea to smuggle missile components out of Sarita Sands."

"No! I never!"

"The evidence at your trial was pretty conclusive."

"I was set up. None of it was true!"

"Walter Wineburg had no reason to frame you."

"He lied. I don't know why, but he lied."

"Grogan, I'm not holding a trial here. I use to pay you for wiring up those black boxes, remember? I'm the one who sold you those shipments of hot electronic parts. So cut the air of injured innocence, okay?"

Grogan said nothing.

"All right." Pica folded her arms. "You're working for me again and you're going back to Sarita Sands."

"What if I don't? You'll send me back to jail?"

Pica looked at him narrowly. "I'll have you killed."

* * *

Grogan bought the components in job lots, from a number of of different electronic and science supply houses, transferring them through five different shipping companies. He also bought a lot of unnecessary stuff, for camouflage. Pica had given him a QuikCash card that paid for all purchases from a nearly untraceable bank account. But he couldn't get cash for the card. She was keeping him on a string, he realized. She could track him through the purchases and he couldn't run out on her without money to build a new I.D. "She doesn't know how much I want to get back to Sarita," he thought grimly. Then he bought the most expensive feedback stereo system he could find and had it delivered to a club called The Joker.

The Joker turned out to be a topless club and biker bar, the sleaziest Grogan had ever seen. The girls had the wasted look of drug addicts and he nearly gagged on the smell of cheap liquor and vomit. No sooner had he sat at a table than one of the bikers sat down at his left. A second appeared instantly and took the chair to his right, while a third sat directly across from him, a very slick job of corralling. Finally a lanky figure with dirty hair and a tattoo on his cheek sat down and said. "My name's Raul. I hear you been looking for me."

Grogan said, "Santi said you could supply me."

"Santi's in prison, man."

"That's where we met."

"Oh yeah." Raul leaned over and his gang hitched their chairs closer. "So like, how is he, man?"

Grogan took a deep breath. This was the danger point. "He's totally psycho, that's how he is.

It makes me sick to think that maniac is going to be out in six years. They ought to throw away the key to his cell."

There was a shocked silence. One of the bikers growled in his throat. Raul held up a hand and giggled crazily. "This dude knows Santi all right. Okay, bring it out."

One of them left and returned minutes later with the feedback stereo. Raul fastened on the headbands that varied the music in response to the listener's alpha waves and spent a few minutes swaying back and forth, listening dreamily. Finally he took the bands and headphones off. "Okay, I like. We make a trade man." He reached into his boot and pulled out a small sonic pistol, the kind police carry as back-ups. Grogan examined it. It looked brand-new.

Raul said, "Never been fired man. Stole it myself."

"Okay," Grogan said. He stuffed the gun under his jacket and got up to leave.

Raul said, "You gonna kill the dude who sent you up."

"Protection," Grogan said shortly. Raul laughed.

* * *

He argued with Pica about the van. "Electric," she said. "It'll have to be quiet."

"You don't understand," he told her. "We'll need a tremendous amount of power. Not just to move and power the equipment but to run the air conditioners."

"You can sweat. Electric."

"I don't mean for comfort. For the equipment. Lasers generate a tremendous amount of heat; and both they and the microprocessors have to be kept cool to operate. We can get a propane-powered rotary engine that's almost as quiet as an electric."

"And the exhaust fumes will give us away. Electric."

Pica was gone most of the day, working on other projects. She gave him two assistants, but they were mainly there to act as guards, so he equipped the van himself; setting the angle of the cameras and calibrating the lasers, programming the computers and carefully sealing the edges of the optical panels so no seams would show. He asked Pica how much room they would need for the cargo.

She said, "No cargo."

"Well, what are we taking out?"

"We are not taking anything out."

"We're bringing something in?"

"Grogan, let me tell you the facts of life." She dusted off the bumper of the van and sat down. "What, in the world, is most precious?"

"Your health."

"Don't be sarcastic."

"Platinum. The Hope diamond. I don't know. The cancer vaccine?"

"No. The most valuable commodity is not kalicineron, or gold, or diamonds, or missile components. It's information." Her silk jumpsuit rustled as she crossed her legs. "The information I want is on disk. You find the disk, transmit it out over a telephone line, and replace the disk. Then you leave and no one is wiser."

"All outside lines from Sarita Sands are monitored."

"It will only take about forty seconds to transmit the information I want and it will be one among thousands of other calls. They won't even try to trace it, though I've taken precautions for that. Most likely it will be logged and forgotten."

"What's the data?"

"Satellite locations of manganese nodules on the ocean floor. Very valuable. They won't release the data because they don't want the Russians to know how good our submarine tracking satellites are."

"Okay." It didn't matter to Grogan anyway. She let her slender hips brush against him as she walked out. Grogan was almost sure she did it on purpose.

* * *

It was ninety degrees inside the van and he was wearing a bulletproof vest, but that was okay. The circuits were good to a hundred thirty and he would have been sweating even at ninety below. He met Pica at a house she had rented just off the road to Sarita Sands. She was alone today; she had even driven the limo herself. "Okay," she said, "Let's see it."

Grogan climbed into the van and hit six switches. The van shimmered and disappeared from view. Pica gasped, then recovered her composure. Grogan grinned. She shook her head admiringly. "I have a lot of faith in you, Grogan, but I really didn't believe it would work."

"Nothing to it really. The van is covered with what is called a holographic surface. Cameras, optical imagers really, analyze the surroundings and how they're changing. They feed the information into a computer which alters the holographic surface appropriately, so all we see is the background in proper perspective."

"Spare me the lecture, please."

"It works best around noon, when shadows are small," Grogan finished.

"Okay." She stood in front of him. "You're wearing the vest? You've memorized the keycodes?"

"Yes."

"The phone numbers?"

"Yes." He wasn't going to bother but she had made him repeat the numbers dozens of times.

"All right. Here's an I.D. badge." She hesitated before giving it to him. "Grogan, if you have any ideas about getting in this van and driving away, forget it. You're still a wanted man. And if the Feds don't find you, I will."

Grogan shrugged.

"Okay then." Unexpectedly, she kissed him. "Good luck."

The gate he took into Sarita Sands Research Center was one used only for transport of radioactive materials. It was the most heavily guarded but it also had the least traffic and Grogan didn't want anyone rear-ending the invisible van. He sat and sweated while a truck was searched, the truck identification checked, the driver's identification checked, and the driver searched. Then the gates

(Continued to next page)

Sight Unseen

(Continued from previous page)

were opened for the truck and he drove the van in right behind. He couldn't believe how easy it was. There were two other sets of gates to be negotiated before he reached the data processing building, but the stark New Mexican desert was a simple task for the van's equipment to duplicate and he penetrated them with growing confidence. There was no movement outside the building. Workers entered in the morning and stayed inside until quitting time, avoiding the daytime heat. He consulted the map Pica had given him and put the van in a handicapped parking space at the back of the building. There were no handicapped people working in data processing, Pica had said. He got out and walked up a wheelchair ramp, then turned around. The van was nowhere to be seen. Tentatively he walked back down and reached out a hand, palm down, so as not to smear the optical surface. He felt the door, hot to his knuckles, and he smiled to himself and went on in.

The door opened to the keycodes Pica had given him; he was met with a blast of air conditioning that made him shiver. He passed the door marked "Data Storage," glanced at it incuriously, and went on, up the emergency stairwell to the third floor, waited at a water fountain until the hall was empty, then he pulled the sonic pistol out of his jacket and put his hand on the knob of Walter Wineburg's door. Flipped the safety off with his thumb, turned the knob, gritted his teeth, and stepped inside. The office was empty.

Grogan cursed himself. Idiot. Of course he might not be in in office. He had work to do. Meetings to attend, lunches, consultations. He forced himself to calm down. The batteries in the van were good for two hours. He had taken twenty minutes to get inside, another twenty for getting out, he had an hour and twenty minutes to wait. To be on the safe side, he would give Wineburg an hour to return. The sonic pistol, at close range, would disrupt enough cells to stop the heart, or if aimed at the head would cause massive cerebral hemorrhage. When Wineburg came back, he would be a dead man.

The more he waited, the more unsure he became. What if Wineburg had taken off sick today? He looked out the window. No, his car, a white Ford with darkened windows, was in his reserved parking space. But what if he came back with someone else? Then Grogan would have to kill both of them and his revenge was for Wineburg. He was beginning to appreciate Pica's skill in planning crimes. Clearly he had done this very badly.

After twenty minutes he could stand it no longer. He left the office and went back down the stairs. As he passed the data storage room he hesitated. He could escape the authorities in the van but he couldn't escape Pica's organization. And there was no telling how long he'd have to hang around waiting for another chance at Wineburg. He still had time to complete her assignment. He punched the keycodes and entered.

Walter Wineburg was waiting inside.

Grogan felt the pressure of the sonic pistol against his side. He made no move. Wineburg was holding a Mossberg police shotgun. He said, "You really are one of life's losers, Grogan. Nightly I thank God for sending us such a fool."

"You and Pica are in this together?"

"Of course. How do you think she got all that inside information about the research center?"

"Look," Grogan said, "I'm confused."

"Think about it, idiot. I'm a party member. Been one for years. But there's an inherent problem with passing along secret information. Eventually our guys learn they have it. Security starts to investigate everyone with access. So when I sent them those missile parts I had to have a scapegoat. That was you. Nothing personal, you understand, you were just the right man in the right place."

"What luck."

"Now this submarine tracking satellite is too important to ignore. But ... two spies in the same place is too much of a coincidence. So imagine my elation when Pica decided to use you again. You've already been convicted, so there would be no question of what you were doing here when they found your body. You just went back for what you missed the first time."

"Spying is one of the few crimes I never figured Pica for."

"Oh hell no. Pica is a business woman all the way. She's just in it for the money. And," he frowned distastefully, "she's got the hots for you."

"Right," said Grogan, and went for the pistol in a short quick move. But he barely got it clear of the jacket before Wineburg raised the shotgun and squeezed the trigger.

The blast caught him full in the chest, forcing him three steps back. He saw Wineburg looking puzzled, then the penny dropped and he started to pump another round into the shotgun.

Grogan gave a short, harsh laugh and fired. But Wineburg swung the shotgun and the sonic blast caught him on the side, a red froth appearing where the skin veins exploded. Wineburg screamed and swung the shotgun again. Grogan went down, tearing the gun away this time. It fired into the ceiling. Alarms went off. Wineburg let it go and scrambled over Grogan, grabbing for his keys. In a second he had them and was running for the door, his shirt dripping red. Grogan cursed and followed. He stumbled onto the ramp in time to see Wineburg slam shut the van door and seemingly vanish into thin air. Grogan aimed the shotgun.

"Freeze, buddy!" He turned to see a security guard aiming a revolver at him. Grogan dropped the gun and turned his head back. The van was nowhere to be seen.

Another guard came around the corner of the building. He was walking two Doberman pinschers.

The dogs turned suddenly savage. They went wild, barking and growling at an invisible phantasm. The guard looked puzzled. He glanced at Grogan, up on the ramp, and at the dogs, and stepped into the driveway. Into the path of the escaping van. It hit him hard, crushing his chest and spattering blood over the sand, over the front of the van, sending spiderweb cracks through the holographic panels. Like a red ghost the blood floated in the air, moving very slowly.

"Bent the axle," Grogan muttered.

Two more dogs appeared, then more guards, then dogs again. Unnoticed by his own guard, Grogan began backing toward the door. One of the dogs got on top on the van. Barking downward, he seemed held in the air by the force of his voice. Black dots appeared beneath him as the guards shot holes in the van's coating. The van stopped.

Grogan turned and bolted back through the door. Knots of people were gathering in the hallways, wondering what was going on. He brushed past, ignoring their questions, and exited through the front door, to the parking lot. In a few minutes he had Wineburg's car started, thanking God under his breath for tinted windows. He headed this time for the main gate, forcing himself to drive slowly, hoping, praying desperately that the guards would be busy, that they wouldn't check his I.D., that they would recognize Wineburg's car and just wave him through as they had done for Grogan many times when he worked here. He came to the main entrance and the gates were closed. Grogan kept the windows rolled up. The guard came out of his shack carrying a clipboard.

Grogan prepared to crash the gate. The telephone rang in the guard's shack. He hesitated, then went back inside. From inside the shack he picked up the phone and waved Grogan through.

Approaching the safe house, Grogan saw Pica pacing worriedly outside, smoking a cigarette. Even in the heat she was wearing a suede lambskin jacket. He spun the Ford into the yard in front of her and bounced out. And found himself looking down the barrel of Pica's automatic.

He had forgotten that she was expecting him to drive up in the van, not a stolen car. He said, "I've been spending a lot of time lately looking down guns."

Pica's eyes widened. She threw her arms around him and cried, "Grogan! I'm so glad to see you!"

* * *

Pica hung up the phone. "Walter Wineburg died en route to the hospital. Apparently that ultrasound shock you gave him wrecked his liver." They were back in her penthouse.

Grogan ignored her.

"I'm disappointed in you, Grogan. You really screwed this one up. You didn't get the data, you lost the van, it will cost a fortune in bribes to keep my name out of the investigation. You and your damn revenge trip."

"My revenge trip kept me alive. And probably you too, in the long run."

"What does that mean?"

"It means you're a fool if you think Wineburg wasn't going eventually do to you what he did to me."

"Hmm. Well, I never did like dealing with that jerk. I prefer men I can manipulate."

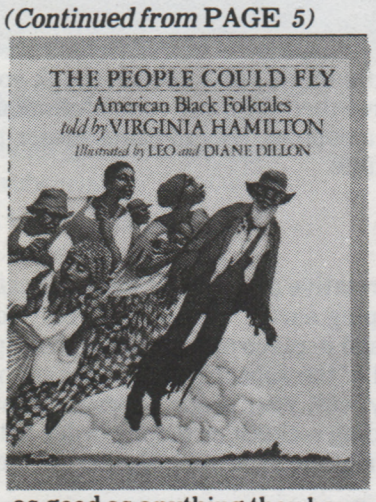
"Oh, yeah?"

"Oh, I didn't mean you." Pica put down her glass and, gently, sat down in his lap. She snaked a warm, tanned arm around his neck. "I like you, Grogan. I like having you around." Grogan put his hands around her slim waist and felt her press against him. She paused from kissing him momentarily. "Really."

Grogan didn't believe her for a second. But he kissed her anyway.

Books

(Continued from PAGE *5)*



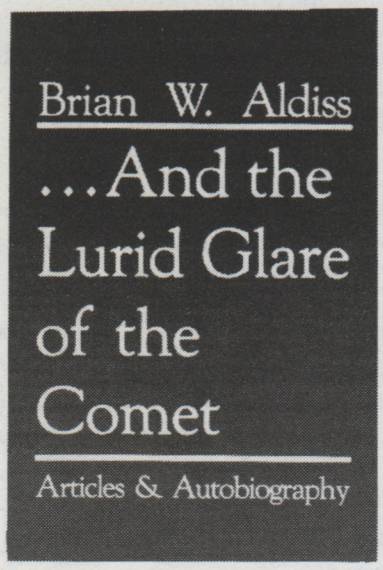
as good as anything they have ever done. The text, by Ms. Hamilton, uses very sparing colloquialisms to excellent effect, and begs to be read aloud. Many of the stories are of course fantastic, as folk tales usually are, and many of them are humorous, which seems a characteristic of the folklore of poor or oppressed peoples, who laugh their way through life because that's the only way to survive.

Rating: ☆☆☆☆

...And the Lurid Glare of the Comet
by Brian Aldiss
Serconia Press, 1986
126 pp., $13.50

This is the second Serconia volume of Aldiss essays (the first was *The Pale Shadow of Science),* and it is, if anything, better than the first, mostly by virtue of a long autobiographical sketch, "The Glass Forest," which gives a very clear idea of where, in the modern parlance, Aldiss is coming from. Other topics include favorite painters, the background of *Barefoot in the Head,* a trip to China, Kingsley Amis, H.G. Wells, Theodore Sturgeon, and more. Aldiss writes with grace and charm and is one of the finest commentators science fiction has.

Rating: ☆☆☆☆☆



Science Fiction, Fantasy, and Weird Fiction Magazines
edited by Marshall Tymn and Mike Ashley
Greenwood Press, 1985
970 pp., $95.00

The steep price tag on this one will keep it out of the hands of most individuals, which is a shame, because here we have a reference work of more than common interest. It consists of entries on every known SF/fantasy magazine ever published, with elaborate publication data and more. The entries are often full essays, with challenging things to say about such important figures as Hugo Gernsback, Michael Moorcock, and John Campbell. Not only do they read well, but they tend to get their facts right, which is more than can be said for, say, the Nichols *Science Fiction Encyclopedia*. I have spotted three errors (that George Scithers began editing *Amra* in 1969, when he really did so in the '50s; that "The Yellow Sign" first appeared in *Famous Fantastic Mysteries,* when it was a reprint from *The King in Yellow;* that the Lovecraft and Merrit items in Lin Carter's *Kadath* were stories, when actually they were poems) but have otherwise spent many hours browsing through with considerable fascination.

A must for any university with a science-fiction collection. For fans, a paperback reprint would be in order.

Rating: ☆☆☆☆☆

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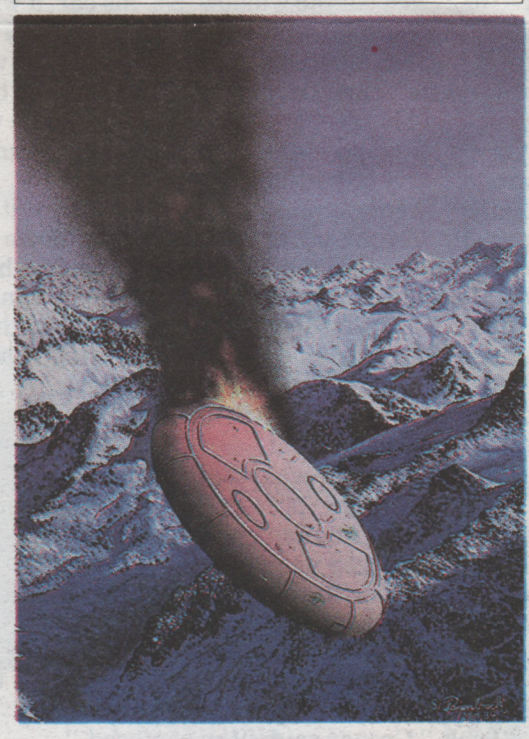

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