

# hatching the phoenix

## FREDERIK POHL

*A seminal figure whose career spans almost the entire development of modern SF, Frederik Pohl has been one of the genre's major shaping forces — as writer, editor, agent, and anthologist—for more than fifty years. He was the founder of the Star series, SF's first continuing anthology series, and was the editor of the Galaxy group of magazines from 1960 to 1969, during which time Galaxy's sister magazine, Worlds of If, won three consecutive Best Professional Magazine Hugos. As a writer, he has won Nebula and Hugo Awards several times (making him the only person ever to have won the Hugo both as editor and as writer), as well as the American Book Award and the French Prix Apollo. His many books include several written in collaboration with the late C. M. Kornbluth—such as The Space Merchants, Wolfbane, and Gladiator-at-Law—and many solo novels, including Man Plus, The Coming of the Quantum Cats, A Plague of Pythons, Slave Ship, Jem, The World at the End of Time, and Mining the Oort. Among his many collections are The Gold at the Starbow's End, The Years of the City, Critical Mass (in collaboration with Kornbluth), In the Problem Pit, Pohlstars, and The Best of Frederik Pohl. He also wrote a nonfiction book in collaboration with the late Isaac Asimov, Our Angry Earth, and an autobiography, The Way the Future Was. His most recent books are the novels O Pioneer!, The Siege of Eternity, and The Far Shore of Time. Coming up soon is a new nonfiction book, Chasing Science. His stories have appeared in our Second and Tenth Annual Collections.*

*Pohl's most famous book is probably Gateway, a book which won both the Nebula and the Hugo, and which is widely regarded as one of the best novels of the '70s. It's also the book in which he introduced the Heechee, a race of enigmatic and (seemingly) long-vanished aliens whose discarded technology enables humanity to begin the exploration of the Galaxy — a series that Pohl would return to several times throughout the rest of the '80s and into the '90s,—with sequels such as Beyond the Blue Event Horizon, Heechee Rendezvous, The Annals of the Heechee, and The Gateway Trip.*

*Occasionally, Pohl writes about the Heechee in shorter format as well. There were two Heechee stories published this year, for instance,*

*including the intriguing novella that follows, in which he takes us far across the galaxy and deep into the past to show us that, no matter how alien the setting, some things don't change—alas!*

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## CHAPTER I

# W

e were only about half a day out when we crossed the wavefront from the Crab supernova. I wouldn't even have noticed it, but my shipmind, Hypatia, is programmed to notice things that might interest me. So she asked me if I wanted to take a look at it, and I did.

Of course I'd already seen the star blow up two or three times in simulations, but as a flesh-and-blood human being I like reality better than simulations — most of the time, anyway. Hypatia had already turned on the Heechee screen, but it showed nothing other than the pebbly gray blur that the Heechee use. Hypatia can read those things, but I can't, so she changed the phase for me.

What I was seeing then was a field of stars, looking exactly like any other field of stars to me. It's a lack in me, I'm sure, but as far as I'm concerned every star looks like all the other stars in the sky, at least until you get close enough to it to see it as a sun. So I had to ask her, "Which one is it?"

She said, "You can't see it yet. We don't have that much magnification. But keep your eyes open. Wait a moment. Another moment. Now, there it is."

She didn't have to say that. I could see it for myself. Suddenly a point of light emerged and got brighter, and brighter still, until it outshone everything else on the screen. It actually made me squint. "It happens pretty fast," I said.

"Well, not really *that* fast, Klara. Our vector velocity, relative to the star, is quite a lot faster than light, so we're speeding things up. Also, we're catching up with the wavefront, so we're seeing it all in reverse. It'll be gone

soon.”

And a moment later it was. Just as the star was brightest of all, it unexploded itself. It became a simple star again, so unremarkable that I couldn't even pick it out. Its planets were unscorched again, their populations, if any, not yet whiffed into plasma. “All right,” I said, somewhat impressed but not enough to want Hy-patia to know it, “turn the screen off and let's get back to work.”

Hypatia sniffed —she has built herself a whole repertoire of human behaviors that I had never had programmed into her. She said darkly, “We'd better, if we want to be able to pay all the bills for this thing. Do you have any idea what this is *costing?*”

Of course, she wasn't serious about that. I have problems, but being able to pay my bills isn't one of them.

I wasn't always this solvent. When I was a kid on that chunk of burned-out hell they call the planet Venus, driving an airbody around its baked, bleak surface for the tourists all day and trying not to spend any of my pay all night, what I wanted most was to have money. I wasn't hoping for a whole lot of money. I just wanted enough money so that I could afford Full Medical and a place to live that didn't stink of rancid seafood. I wasn't dreaming on any vast scale.

It didn't work out that way, though. I never did have exactly that much money.

First I had none at all and no real hopes of ever getting any. Then I had much, much more than that, and I found out something about having a lot of money. When you have the kind of money that's spelled M\*O\*N\*E\*Y, it's like having a kitten in the house. The money wants you to play with it. You can try to leave it alone, but if you do it'll be crawling into your lap and nibbling at your chin for attention. You don't have to give in to what the money wants. You can just push it away and go about your business, but then God knows what mischief it'll get into if you do, and anyway then where's the fun of having it?

So most of the way out to the PhoenixCorp site, Hypatia and I played with my money. That is, I played with it while Hypatia kept score. She remembers what I own better than I do — that's her nature, being the sort of task she was designed to do — and she's always full of suggestions about what investments I should dump or hold or what new ventures I should get into.

The key word there is “suggestions.” I don’t have to do what Hypatia says. Sometimes I don’t. As a general rule I follow Hypatia’s suggestions about four times out of five. The fifth time I do something different, just to let her know that I’m the one who makes the decisions here. I know that’s not smart, and it generally costs me money when I do. But that’s all right. I have plenty to spare.

There’s a limit to how long I’m willing to go on tickling the money’s tummy, though. When I had just about reached that point, Hypatia put down her pointer and waved the graphics displays away. She had made herself optically visible to humor me, because I like to see the person I’m talking to, wearing her fifth-century robes and coronet of rough-cut rubies and all, and she gave me an inquiring look. “Ready to take a little break, Klara?” she asked. “Do you want something to eat?”

Well, I was, and I did. She knew that perfectly well. She’s continually monitoring my body, because that’s one of the other tasks she’s designed to do, but I like to keep my free will going there, too. “Actually,” I said, “I’d rather have a drink. How are we doing for time?”

“Right on schedule, Klara. We’ll be there in ten hours or so.” She didn’t move — that is, her simulation didn’t move—but I could hear the clink of ice going into a glass in the galley. “I’ve been accessing the PhoenixCorp shipmind. If you want to see what’s going on ... ?”

“Do it,” I said, but she was already doing it. She waved again —pure theater, of course, but Hypatia’s full of that—and we got a new set of graphics. As the little serving cart rolled in and stopped just by my right hand, we were looking through PhoenixCorp’s own visuals, and what we were looking at was a dish-shaped metal spiderweb, with little things crawling across it. I could form no precise picture of its size, because there was nothing in the space around it to compare it with. But I didn’t have to. I knew it was big.

“Have one for yourself,” I said, lifting my glass.

She gave me that patient, exasperated look and let it pass. Sometimes she does simulate having a simulated drink with me while I have a real one, but this time she was in her schoolteacher mode. “As you can see, Klara,” she informed me, “the shipment of optical mirror pieces has arrived, and the drones are putting them in place on the parabolic dish. They’ll be getting first light from the planet in an hour or so, but I don’t think you’ll care about seeing it. The resolution will be poor until they get

everything put together; that should take about eighteen hours. Then we should have optimal resolution to observe the planet.”

“For four days,” I said, taking a pull at my glass.

She gave me a different look —still the schoolteacher, but now a schoolteacher putting up with a particularly annoying student. “Hey, Klara. You knew there wouldn’t be much time. It wasn’t my idea to come all the way out here anyway. We could have watched the whole thing from your island.”

I swallowed the rest of my nightcap and stood up. “That’s not how I wanted to do it,” I told her. “The trouble with your simulations is that you don’t appreciate what reality is like. Wake me up an hour before we get there.”

And I headed for my stateroom, with my big and round and unoccupied bed. I didn’t want to chat with Hypatia just then. The main reason I had kept her busy giving me financial advice so long was that it prevented her from giving me advice on the thing she was always trying to talk me into, or that one other big thing that I really needed to make up my mind about, and couldn’t.

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The cart with my black coffee and fresh-squeezed orange juice —make that quote “fresh-squeezed” unquote orange juice, but Hypatia was too good at her job for me to be able to tell the difference — was right by my bed when she woke me up. “Ninety minutes to linkup,” she said cheerily, “and a very good morning to you. Shall I start your shower?”

I said, “Um.” Ninety minutes is not a second too long for me to sit and swallow coffee, staring into space, before I have to do anything as energetic as getting into a shower. But then I looked into the wall mirror by the bed, didn’t like what I saw, and decided I’d better spruce myself up a little bit.

I was never what you’d call a pretty woman. My eyebrows were a lot too heavy, for one thing. Once or twice over the years I’d had the damn things thinned down to fashion-model proportions, just to see if it would help any. It didn’t. I’d even messed around with my bone structure, more cheekbones, less jaw, to try to look a little less masculine. It just made me look weak-faced. For a couple of years I’d gone blonde, then tried redhead once but checked it out and made them change it back before I left the

beauty parlor. They were all mistakes. They didn't work. Whenever I looked at myself, whatever the cosmetologists and the medical fixer-uppers had done, I could still see the old Gelle-Klara Moynlin hiding there behind all the trim. So screw it. For the last little while I'd gone natural.

Well, pretty natural, anyway. I didn't want to look *old*.

I didn't, of course. By the time I was bathed and my hair was fixed and I was wearing a simple dress that showed off my pretty good legs, actually, I looked as good as I ever had. "Almost there," Hypatia called. "You better hang on to some-thing. I have to match velocities, and it's a tricky job." She sounded annoyed, as she usually does when I give her something hard to do. She does it, of course, but she complains a lot. "Faster than light I can do, slower than light I can do, but when you tell me to match velocity with somebody who's doing exactly  $c$  you're into some pretty weird effects, so —Oh, sorry."

"You should be," I told her, because that last lurch had nearly made me spill my third cup of coffee. "Hypatia? What do you think, the pearls or the cameo?"

She did that fake two- or three-second pause, as though she really needed any time at all to make a decision, before she gave me the verdict. "I'd wear the cameo. Only whores wear pearls in the daytime."

So of course I decided to wear the pearls. She sighed but didn't comment. "All right," she said, opening the port. "We're docked. Mind the step, and I'll keep in touch."

I nodded and stepped over the seals into the PhoenixCorp mother ship.

There wasn't any real "step." What there was was a sharp transition from the comfortable one gee I kept in my own ship to the gravityless environment of the PhoenixCorp ship. My stomach did a quick little flip-flop of protest, but I grabbed a hold-on bar and looked around.

I don't know what I'd expected to find, maybe something like the old Gateway asteroid. PhoenixCorp had done itself a lot more lavishly than that, and I began to wonder if I hadn't maybe been a touch too open-handed with the financing. The place certainly didn't smell like Gateway. Instead of Gateway's sour, ancient fug, it had the wetly sweet smell of a greenhouse. That was because there were vines and ferns and flowers growing in pots all around the room — spreading out in all directions, because of that

zero-gee environment, and if I'd thought about that ahead of time, I wouldn't have worn a skirt. The only human being in sight was a tall, nearly naked black man who was hanging by one toe from a wall bracket, exercising his muscles with one of those metal-spring gadgets. ("Hum-phrey Mason-Manley," Hypatia whispered in my ear. "He's the archeologist-anthropologist guy from the British Museum.") Without breaking his rhythm, Humphrey gave me a look of annoyance.

"What are you doing here, miss? No visitors are permitted. This is private prop-erty, and — "

Then he got a better look at me and his expression changed. Not to welcoming exactly, but to what I'd call sort of unwillingly impressed. "Oh, crikey," he said. "You're Gelle-Klara Moynlin, are you not? That's a bit different. Welcome aboard, I guess."

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## CHAPTER II

It wasn't the most affable greeting I'd ever had. However, when Humphrey Mason-Manley woke up the head engineer for me, she turned out to be a lot more courteous. She didn't have to be, either. Although I had put up the seed money to get the project started, PhoenixCorp was set up as a nonprofit institution, owned by nobody but itself. I wasn't even on the board.

The boss engineer's name, Hypatia whispered to me, was June Thaddeus Terple — *Doctor* Terple. I didn't really need the reminder. Terple and I had met before, though only by screen, when she was trying to scare up money for this venture and somebody had given her my name. In person she was taller than I'd thought. She looked to be about the age I looked to be myself, which is to say, charitably, thirtyish. She was wearing a kind of string bikini, plus a workman's belt of little pouches around her waist so she could keep stuff in it. She took me into her office, which was a sort of wedge-shaped chamber with nothing much visible in it but handholds on the walls and a lot more of those flowering plants. "Sorry I wasn't there to meet you, Dr. Moynlin," she said.

"I'm not a doctor of anything, except honorary, and Klara's good enough."

She bobbed her head. "Anyway, of course you're welcome here any time. I guess you wanted to see for yourself how we're coming along."

“Well, I did want that, yes. I also wanted to set something up, if you don’t mind.” That was me returning courtesy for courtesy, however unnecessary it was in either direction. “Do you know who Wilhelm Tarch is?”

She thought for a moment. “No.”

So much for his galaxywide fame. I explained. “Bill’s a kind of roving reporter. He has a program that goes out all over, even to the Heechee in the Core. It’s sort of a travelogue. He visits exciting and colorful places and reports on them for the stay-at-homes.” He was also my present main lover, but there wasn’t any reason to mention that to Terple; she would figure it out for herself fast enough.

“And he wants to do PhoenixCorp?”

“If you don’t mind,” I said again. “I did clear it with the board.”

She grinned at me. “So you did, but I sort of lost track of it. We’ve been deploying the drones, so it’s been kind of busy.” She shook herself. “Anyway, Hans tells me your shipmind displayed the actual supernova explosion to you on the way out.”

“That’s right, she did.” In my ear Hypatia was whispering that Hans was the name of their shipmind, as though I couldn’t figure that out for myself.

“And I suppose you know what it looks like from Earth now?”

“Well, sort of.”

I could see her assessing how much “sort of” amounted to, and deciding to be diplomatic to the money person. “It wouldn’t hurt to take another look. Hans! Telescopic view from Earth, please.”

She was looking toward one end of her office. It disappeared, and in its place we were looking out at a blotchy patch of light. “That’s it. It’s called the Crab Nebula. Of course, they named it that before they really knew what it was, but you can see where they got the name.” I agreed that it did look a little like some sort of deformed crab, and Terple went on. “The nebula itself is just the gases and stuff that the supernova threw off, a thousand years or so later. I don’t know if you can make it out, but there’s a little spot in the middle of it that’s the Crab pulsar. That’s all that’s left of the star. Now



let's look at the way it was before it went super."

Hans wiped the nebula away, and we were looking into the same deep, black space Hypatia had shown me already. There were the same zillion stars hanging there, but as the shipmind zoomed the picture closer, one extraordinarily bright one appeared. "Bright" didn't do it justice. It was a blazing golden yellow, curiously fuzzy. It wasn't really hot. It couldn't be; the simulation was only optical. But I could almost feel its heat on my face.

"I don't see any planet," I offered.

"Oh, you will, once we get all the optical segments in place." Then she inter-rupted herself. "I forgot to ask. Would you like a cup of tea or something?"

"Thanks, no. Nothing right this minute." I was peering at the star. "I thought it would be brighter," I said, a little disappointed.

"Oh, it will be, Klara. That's what we're building that five-hundred-kilometer mirror for. Right now we're just getting the gravitational lensing from the black hole we're using—there's a little camera in the mirror. I don't know if you know much about black holes, but—oh, shit," she interrupted herself, suddenly stricken. "You do know, don't you? I mean, after you were stuck in one for thirty or forty years ..."

She looked as though she had inadvertently caused me great pain. She hadn't. I was used to that sort of reaction. People rarely brought up the subject of black holes in my presence, on the general principle that you don't talk about rope when there's been a hanging in the house. But the time I was trapped in one of them was far back in the past. It had gone like a flash for me in the black hole's time dilation, whatever the elapsed time was on the outside, and I wasn't sensitive about it.

On the other hand, I wasn't interested in discussing it one more damn time, either, so I just said, "My black hole didn't look like that. It was a creepy kind of pale blue."

Terple recovered quickly. She gave me a wise nod of the head. "That would have been Cerenkov radiation. Yours must have been what they call a naked singularity. This one's different. It's wrapped up in its own ergosphere and you can't see a thing. Most black holes produce a lot of radiation—not from them-selves, from the gases and stuff they're swallowing—but this one has already swal-lowed everything around it. Anyway." She paused to recollect her train of thought. Then she nodded. "I

was telling you about the gravitational lensing. Hans?”

She didn't say what she wanted from Hans, but evidently he could figure it out for himself. The stars disappeared, and a sort of wall of misty white appeared in front of us. Terple poked at it here and there with a finger, drawing a little picture for me:

“That little dot on the left, that's the Crabber planet we want to study. The circle's the black hole. The arc on the right is our mirror, which is right at the point of convergence—where the gravitational lensing from the black hole gives us the sharpest image. And the little dot next to it is us, at the Cassegrain focus of the mirror. I didn't show the Crabber sun —actually we have to avoid aiming the camera at it, because it could burn out our optics. Am I making sense so far?”

“So far,” I agreed.

She gave me another of those assessing looks, then said, “We'll actually be doing our observing by looking toward the mirror, not toward the Crab planet. There too we'll have to block out the star itself, or we won't see the actual planet at all, but that's just another of the things we'll be adjusting. Then we'll actually be looking diametrically away from the planet in order to observe it.”

I hadn't been able to resist the temptation with Hypatia, and I couldn't now with June Terple. “For four or five days,” I said in my friendliest voice.

I guess the tone wasn't friendly enough. She looked nettled. “Listen, we didn't put the damn black hole where it is. It took us two years of searching to find one in the right position. There's a neutron star that we could've used. Orbitwise it was a better deal because it would have given us nearly eighty years to observe, but it's just a damn neutron star. It wouldn't have given us anywhere the same magnification, because a neutron star just doesn't have anywhere near as much mass as a black hole, so the gravitational lensing would've been a lot less. We'll get a lot more detail with our black hole. Anyway,” she added, “once we've observed from here we'll move this whole lash-up to the neutron star for whatever additional data we can get—I mean, uh, if that seems advisable, we will.”

What she meant by that was if I was willing to pay for it. Well, I probably was. The capital costs were paid; it would only mean meeting their payroll for another eighty years or so.

But I wasn't ready to make that commitment. To take her mind off it, I

said, "I thought we were supposed to have almost thirty days of observing right here."

She looked glum. "*Radio* observing. That's why we built the mesh dish. But it turns out there's no radio coming from the Crabber planet at all, so we had to get the mirror plates to convert it to optical. Took us over three weeks, which is why we lost so much observing time."

"I see," I said. "No radio signals. So there might not be any civilization there to observe, anyway."

She bit her lip. "We know definitely that there's *life* there. Or was, anyway. It's one of the planets the Heechee surveyed long ago, and there were advanced living organisms there at the time —pretty primitive, sure, but they certainly looked as though they had the potential to evolve."

"The *potential* to evolve, right. But whether they did or not we just don't know."

She didn't answer that. She just sighed. Then she said, "As long as you're here, would you like a look around?"

"If I won't be in the way," I said.

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Of course I was in the way. June Terple didn't let it show, but some of the others barely gave me the courtesy of looking up when we were introduced. There were eight of them altogether, with names like Julia Ibaruru and Mark Rohrbeck and Humphrey Mason-Manley and Oleg Kekuskian and —well, I didn't have to try to retain them all; Hypatia would clue me as needed. Humphrey Mason-Manley was the guy who'd been building his pecs when I came in. Julia was the one who was floating in a harness surrounded by fifteen or twenty 3-D icons that she was busy poking at and glowering at and poking at again, and she gave me no more than a quick and noncommittal nod. If my name meant anything to her, or to most of the others, they didn't show any signs of being impressed. Especially Rohrbeck and Kekuskian didn't, because they were sound asleep in their harnesses when we peeked in on them, and Terple had a finger to her lips. "Third shift," she whispered when we'd closed the flaps on their cubicles and moved away. "They'll be waking up for dinner in a little while, but let's let them get their sleep. And there's only one other. Let's go find her."

On the way to that one other member of the crew, Hypatia was

whispering bits of biography in my ear. Kekuskian was the quite elderly and bisexual astrophysicist. Rohrbeck the quite young and deeply depressed program designer, whose marriage had just come painfully apart. And the one remaining person was. . .

Was a  
Heechee.

I didn't have to be told that. Once you've seen any one Heechee, you know what they all look like; skeletally thin front to back, squarish, skull-like faces, their data pod, hanging between their legs where, if they were male, their balls should be, and if female (as this one turned out to be), there shouldn't be anything much at all. Her name, Terple said, was Starminder, and as we entered her chamber she was working at a set of icons of her own. But as soon as she heard my name she wiped them and barreled over to me to shake my hand. "You are very famous among us in the Core, Gelle-Klara Moynlin," she informed me, hanging on to my hand for support. "Because of your Moynlin Citizen Ambassadors, you see. When your Rebecca Shapiro person came to our city, she was invited to stay with the father of my husband's family, which is where I met her. She was quite in-formative about human beings; indeed, it was because of her that I volunteered at once to come out. Do you know her?"

I tried to remember Rebecca Shapiro. I had put up grant money for a good many batches of recruits since I funded the program, and she would have had to be one of the earliest of them. Starminder saw my uncertainty and tried to be helpful. "Young woman. Very sad. She sang music composed by your now-dead Wolfgang Amadeus Mozart for our people, which I almost came to enjoy."

"Oh, right, *that* Rebecca," I said, not very honestly. By then I'd paid the fare to the Core for—what? —at least two or three hundred Rebeccas or Carloses or Janes who volunteered to be Citizen Ambassadors to the Heechee in the Core because they had lives that were a shambles. That was a given. If their lives hadn't been, why would they want to leave the people and places they wouldn't ever come back to?

Because, of course, the Core was time-dilated, like any black hole. I knew what that meant. When you were time-dilated in the Core, where a couple of centuries of outside time went by every day, the problems you left behind got really old really fast. Time dilation was better than suicide — though, when you came to think of it, actually a kind of reverse suicide is pretty much what it was. You didn't die yourself, but every troublesome person you'd ever known did while you were gone.

I wish all those Citizen Ambassadors of mine well. I hope it all works out for them ... but being in a black hole hadn't done a thing for me.

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Once I'd met all the people on the PhoenixCorp ship, there wasn't much else to see. I had misjudged my budget-watchers. Terple hadn't been that spendthrift after all. If you didn't count the opulent plantings—and they were there primarily to keep the air good—the PhoenixCorp ship actually was a pretty bare-bones kind of spacecraft. There were the sleeping quarters for the help, and some common rooms—the big one I'd come into when I first entered, plus a sort of dining room with beverage dispensers and netting next to the hold-ons to keep the meals from flying away, a couple of little rooms for music or virtuals when the people wanted some recreation. The rest of it was storage and, of course, all the machinery and instrumentation PhoenixCorp needed to do its job. Terple didn't show me any of the hardware. I didn't expect her to. That's the shipmind's business, and that sort of thing stays sealed away where no harm can come to it. So, unless somebody had been foolish enough to open up a lot of compartments that were meant to stay closed, there wouldn't have been anything to see.

When we were finished, she finally insisted on that cup of tea—really that capsule of tea, that is—and while we were drinking it, holding with one hand to the hold-ons, she said, "That's about it, Klara. Oh, wait a minute. I haven't actually introduced you to our shipmind, have I? Hans? Say hello to Ms. Moynlin."

A deep, pleasant male voice said, "Hello, Ms. Moynlin. Welcome aboard. We've been hoping you'd visit us."

I said hello back to him and left it at that. I don't particularly like chatting with machine intelligences, except my own. I finished my tea, slid the empty capsule into its slot, and said, "Well, I'll get out of your way. I want to get back to my own ship for a bit anyway."

Terple nodded and didn't ask why. "We're going to have dinner in about an hour. Would you like to join us? Hans is a pretty good cook."

That sounded like as good an idea as any, so I told her that would be fine.

Then, as she was escorting me to the docking port, she gave me a

sidewise look. “Listen,” she said, “I’m sorry we bombed out on the radio search. It doesn’t necessarily mean that the Crabbers never got civilized. After all, if somebody had scanned Earth any time before the twentieth century, they wouldn’t have heard any radio signals there, either, but the human race was fully evolved by then.”

“I know that, June.”

“Yes.” She cleared her throat. “Do you mind if I ask you a question?”

I said, “Of course not,” meaning that she could ask anything she wanted to, but whether or what I chose to answer was another matter entirely.

“Well, you put a lot of money into getting Phoenix started, just on the chance that there might have been an intelligent race there that got fried when their sun went super. What I’m wondering is why.”

The answer to that was simple enough. I mean, what’s the point of being just about the richest woman in the universe if you don’t have a little fun with your money now and then? But I didn’t say that to her. I just said, “What else do I have to do?”

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## CHAPTER III

Well, I did have things to do. Lots of them, though most of them weren’t very important.

The only one that was really important—to me —was overseeing the little island off Tahiti that I live on when I’m home. It’s a nice place, the way I’ve fixed it up. Most of my more-or-less family is there, and when I’m away I really miss them.

Then there are other important things, such as spending some time with Bill Tartch, who is a fairly sweet man, not to mention all the others like Bill Tartch who have come along over the years. Or such things as all the stuff I can buy with my money, plus figuring out what to do with the power that that kind of money gives. Put them all together, I had *plenty* to do with my life. And I had plenty of life to look forward to, too, especially if I let Hypatia talk me into immortality.

So why wasn't I looking forward to it?

When I came back into my ship, Hypatia was waiting for me—visible, in full 3-D simulation, lounging draped Roman-style on the love seat in the main cabin and fully dressed in her fifth-century robes.

“So how did you like your investment?” she asked sociably.

“Tell you in a minute,” I said, going to the head and closing the door behind me. Of course, a closed door makes no real difference with Hypatia. She can see me wherever I am on the ship, and no doubt does, but as long as a machine intelligence acts and looks human, I want it to pretend to observe human courtesies.

Hitting the head was the main reason I'd come back to my ship just then. I don't like peeing in free fall, in those awful toilets they have. Hypatia keeps ours at a suitable gravity for my comfort, like the rest of the ship. Besides, it makes her nervous if I use any toilets outside the ship, because she likes to rummage through my excretions to see if I'm staying healthy.

Which she had been doing while I was in the head. When I came out, she didn't seem to have moved, but she said, “Are you really going to eat their food?”

“Sure. Why not?”

“You've been running a little high on polyglycerides. Better you let me cook for you.”

Teasing her, I said, “June Terple says Hans is a better cook.”

“She said he's a *good* cook,” she corrected me, “but so am I. I've been accessing him, by the way, so if there's anything you'd like to know about the crew. . . .”

“Not about the crew, but Starminder said something about a Rebecca Shapiro. Who was she?”

“That data is not in the Phoenix shipmind's stores, Klara,” she said, reproving me. “However...”

She whited out a corner of my lounge and displayed a face on it while she gave me a capsule biography of Rebecca Shapiro. Rebecca had been a dramatic soprano with a brilliant operatic future ahead of her until she got

her larynx crushed in a plane crash. They'd repaired it well enough for most purposes, but she was never going to be able to sing "The Queen of the Night" again. So, with her life on Earth ruined, Rebecca had signed up for my program. "Any other questions?" Hypatia said.

"Not about Rebecca, but I've been wondering why they call their shipmind Hans."

"Oh, that was Mark Rohrbeck's idea; he wanted to name him after some old computer pioneer. The name doesn't matter, though, does it? I mean, why did you decide to call me Hypatia?"

"Because Hypatia of Alexandria was a smart, snotty bitch," I told her. "Like you."

"Humph," she said.

"As well as being the first great woman scientist," I added, because Hypatia always likes to talk about herself.

"The first *known* one," she corrected. "Who knows how many there were whose accomplishments didn't manage to survive? Women didn't get much of a break in your ancient meat world—or, for that matter, now."

"You were supposed to be beautiful, too," I reminded her. "And you died a virgin anyway."

"By choice, Klara. Even that old Hypatia didn't care much for all that messy meat stuff. And I didn't just die. I was brutally murdered. It was a cold wet spring in A.D. 450, and a gang of those damn Nitrian monks tore me to shreds because I wasn't a Christian. Anyway," she finished, "you're the one who picked my identity. If you wanted me to be someone else, you could have given me a different one."

She had me grinning by then. "I still can," I reminded her. "Maybe something like Joan of Arc?"

She shuddered fastidiously at the idea of being a Christian instead of a gods-fearing Roman pagan and changed the subject. "Would you like me to put a call through to Mr. Tartch now?"

Well, I would and I wouldn't. I had unfinished business to settle with Bill Tartch, but I wasn't quite ready to settle it, so I shook my head. "I've been wondering about these extinct people we're trying to resurrect. Have



you got any Heechee records of the planet that I haven't seen yet?"

"You bet. More than you'll ever want to watch."

"So show me some."

"Sure thing, boss," she said, and disappeared, and all at once I was standing on an outcropping of rock, looking down on a bright, green valley where some funny-looking animals were moving around.

\* \* \* \*

That was the difference between PhoenixCorp's major simulations and mine. Mine cost more. Theirs were good enough for working purposes, because they showed you pretty much anything you wanted to see, but mine put you right in the middle of it. Mine were full sensory systems, too, so I could smell and feel as well as I could see and hear. As I stood there, a warm breeze ruffled my hair, and I smelled a distinct reek of smoke. "Hey, Hypatia," I said, a little surprised. "Have these people discovered fire?"

"Not to use, no," she murmured in my ear. "Must've been a lightning strike up in the hills from the storm."

"What storm?"

"The one that just passed. Don't you see everything's wet?"

Not on my rock, it wasn't. The sun overhead was big and bright and very hot.

It had already baked the rock dry, but I could see that the jumble of dark green vines at the base of my rock was still dripping, and when I turned around I could see a splotch of burning vegetation on the distant hill.

The valley was more interesting. Patches of trees, or something like trees; a herd of big, shaggy creatures, Kodiak bear-sized but obviously vegetarians because they were industriously pushing some of the trees over to eat their leaves; a pair of rivers, a narrow, fast-moving one with little waterfalls that came down from the hills to my left and flowed to join a broader, more sluggish one on the right to make a bigger stream; a few other shaggy creatures, these quite a lot bigger still, feeding by themselves on whatever was growing in the plain—well, it was an interesting sight; maybe a little like the great American prairie or the African veldt must have

looked before our forebears killed off all the wild meat animals.

The most interesting part of the simulation was a pack of a dozen or so predators in the middle distance, circling furtively around a group of three or four creatures I couldn't easily make out. I pointed. "Are those the ones?" I asked Hypatia. And when she said they were, I told her to get me up closer.

At close range I could see the hunted ones looked something like pigs — that is, if pigs happened to have long, skinny legs and long, squirrely tails. I noticed a mommy pig baring her teeth and trying to snap at the predators in all directions at once, and three little ones doing their best to huddle under the mother's belly. It was the predators I was paying attention to. They looked vaguely primate. That is, they had apelike faces and short tails. But they didn't look like any primate that ever lived on Earth, because they had six limbs: four that they ran on, and two more like arms, and in their sort-of hands they held sharp-edged rocks. As they got into position, they began hurling the rocks at the prey.

The mother pig didn't have a chance. In a couple of minutes, two of her babies were down and she was racing away with that long tail flicking from side to side like a metronome, and the surviving piglet right behind her, its tail-flicks keeping time with its mother's, and the six-limbed predators had what they had come for.

It was not a pretty scene.

I know perfectly well that animals live by eating, and I'm not sentimental about the matter —hell, I eat-steak! (Not always out of a food factory, either.) All the same, I didn't like watching what was happening on this half-million-year-old alien veldt, because one of the piglets was still alive when the wolf-apes began eating it, and its pitiful shrieking got to me.

So I wasn't a bit sorry when Hypatia interrupted me to say that Mr. Tartch hadn't waited for me to call him and was already on the line.

\* \* \* \*

Nearly all of my conversations with Bill Tartch get into some kind of intimate area. He likes that kind of sexy talk. I don't particularly, so I tried to keep the call short. The basic facts he had to convey were that he missed me and that, unspokenly, he looked as good as ever—not very tall, not exactly handsome but solidly built and with a great, challenging

I-know-what-fun-is-all-about grin —and that he was just two days out. That's not a lot of hard data to get out of what was more than a quarter-hour of talk capsuled back and forth over all those light-years. I guess, but the rest was private; and when I was finished, it was about time to get dressed for dinner with the PhoenixCorp people.

Hypatia was way ahead of me, as usual. She had gone through my wardrobe and used her effectuators to pull out a dressy pants suit for me, so I wouldn't have a skirt to keep flying up, along with a gold neckband that wouldn't be flopping around my face as the pearls had. They were good choices; I didn't argue. And while I was getting into them she asked chattily, "So did Mr. Tartch say thank you?"

I know Hypatia's tones by now. This one made my hackles rise. "For what?"

"Why, for keeping his career going," she said, sounding surprised. "He was pretty much washed up until you came along, wasn't he? So it's only appropriate that he should, you know, display his gratitude."

"You're pushing your luck," I told her as I slipped into a pair of jeweled stock-ings. Sometimes I think Hypatia gets a little too personal, and this time it just wasn't justified. I didn't have to do favors to get a man. Christ, the problem was to fend them off! It's just that when it's over I like to leave them a little better off than I found them; and Bill, true enough, had reached that stage in his career when a little help now and then was useful.

But I didn't want to discuss it with her. "Talk about something else or shut up," I ordered.

"Sure, hon. Let's see. How did you like the Crabbers?"

I told her the truth. "Not much. Their table manners are pretty lousy."

Hypatia giggled. "Getting a weak stomach, Klara? Do you really think they're much worse than your own remote predecessors? Because I don't think *Australo-pithecus robustus* worried too much about whether its dinners were enjoying the meal, either."

We were getting into a familiar argument. "That was a long time ago, Hypatia."

"So is what you were looking at with the Crabbers, hon. Animals are animals. Now, if you really want to take yourself out of that nasty kill-and-eat

business —”

“Not yet,” I told her, as I had told her many times before.

What Hypatia wanted to do was to vasten me. That is, take me out of my meat body, with all its aches and annoyances, and make me into a pure, machine-stored intelligence. As other people I knew had done. Like Hypatia herself, though in her case she was no more than a simulated approximation of someone who had once been living meat.

It was a scary idea, to be sure, but not altogether unattractive. I wasn't getting as much pleasure as I would have liked out of living, but I certainly didn't want to *die*. And if I did what Hypatia wanted, I would never have to.

But I wasn't prepared to take that step yet. There were one or two things a meat person could do that a machine person couldn't—well, one big one —and I wasn't prepared to abandon the flesh until I had done what the female flesh was best at. For which I needed a man . . . and I wasn't at all sure that Bill Tartch was the particular man I needed.

\* \* \* \*

When I got back for dinner in the PhoenixCorp vessel, everybody was looking conspiratorial and expectant. “We've got about twenty percent of the optical sheets in place,” Terple informed me, thrilled with excitement. “Would you like to see?” She didn't wait for an answer, but commanded: “Hans! Display the planet.”

The lights went dark, and before us floated a blue-and-white globe the size of my head, looking as though it were maybe ten meters away. It was half in darkness and half in sunlight, from a sun that was out of sight off to my right. There was a half-moon, too, just popping into sight from behind the planet. It looked smaller than Luna, and if it had markings of craters and seas, I couldn't see them. On the planet itself I could make out a large ocean and a kind of squared-off continent on the illuminated side. Terple did something that made the lights in the room go off, and then I could see that there had to be even more land on the dark side, because spots of light—artificial lights, cities' lights — blossomed all over parts of the nighttime area.

“You see, Klara?” she crowed. “Cities! Civilization!”

\* \* \* \*

## CHAPTER IV

Their shipmind really was a good cook. Fat pink shrimp that tasted as though they'd come out of the sea within the hour, followed by a fritto misto, the same, with a decent risotto and figs in cream for dessert. Everything was all perfectly prepared. Or maybe it just seemed so, because everybody was visibly relaxing now that it had turned out we really did have something to observe.

What there wasn't any of was wine to go with the meal, just some sort of tropical juices in the winebulbs. June Terple noticed my expression when I tasted it. "We're not doing anything alcoholic until we've completed the obs," she said, half apologetic, half challenging, "Still, I think Hans can get you something if you really want it."

I shook my head politely, but I was wondering if Hypatia had happened to say anything to Hans about my fondness for a drink now and then. Probably she had; shipminds do gossip when they're as advanced as Hypatia and Hans, and it was evident that the crew did know something about me. The conversation was lively and far-ranging, but it never, never touched on the subject of the black hole itself, or black holes in general.

We made a nice, leisurely meal of it. The only interruptions were inconspicuous, as crew members one after another briefly excused themselves to double-check how well the spider robots were doing as they clambered all over that five-hundred-kilometer dish, seamlessly stitching the optical reflection plates into their perfect parabola. None of the organic crew really had to bother. Hans was permanently vigilant, about that and everything else, but Terple obviously ran a tight ship. A lot of the back-and-forth chat was in-jokes, but that wasn't a problem because Hypatia explained them, whispering in my ear.

When somebody mentioned homesickness and Oleg Kekuskian said jestingly— *pointedly* jestingly—that some of us weren't homesick at all, the remark was aimed at Humphrey Mason-Manley: "He's pronging Terple, Klara, and Kekuskian's jealous," Hypatia told me.

Julia —that was Hoo-lia —Ibarruru, the fat and elderly Peruvian-Incan former schoolteacher, was wistfully telling Starminder how much she wished she could visit the Core before she died, and was indignant when she found out that I'd never been to Machu Picchu. "And you've been all

over the galaxy? And never took the time to see one of the greatest wonders of your own planet?”

The only subdued one was Mark Rohrbeck. Between the figs and the coffee, he excused himself and didn't come back for nearly half an hour. “Calling home,” Mason-Manley said wisely, and Hypatia, who was the galaxy's greatest eavesdropper when I let her be, filled me in. “He's trying to talk his wife out of the divorce. She isn't buying it.”

When the coffee was about half gone, Terple whispered something to the air. Evidently Hans was listening, and in a moment the end of the room went dark. Almost at once the planet appeared for us again, noticeably bigger than it had been before. She whispered again, and the image expanded until it filled the room, and I had the sudden vertiginous sense that I was falling into it.

“We're getting about two- or three-kilometer resolution now,” Terple announced proudly.

That didn't give us much beyond mountains, shorelines, and clouds, and the planet was still half in sun and half dark. (Well, it had to be, didn't it? The planet was rotating under us, but its relative position to its sun didn't change.) When I studied it, something looked odd about the land mass at the bottom of the image. I pointed. “Is that ocean, there, down on the left side? I mean the dark part. Because I didn't see any lights there.”

“No, it's land, all right. It's probably just that that part is too cold to be inhabited. We're not getting a square look at the planet, you know. We're about twenty degrees south of its equator, so we're seeing more of its south pole and nothing north of, let's say, what would be Scotland or southern Alaska on Earth. Have you seen the globe Hans put together for us? No? Hans, display.”

Immediately a sphere appeared in the middle of the room, rotating slowly. It would have looked exactly like the kind my grandfather kept in his living room, latitude and longitude lines and all, except that the land masses were wholly wrong. “This is derived from old Heechee data that Starminder provided for us,” Hans's voice informed me. “However, we've given our own names to the conti-nents. You see the one that's made up of two fairly circular masses, connected by an isthmus, that looks like a dumbbell? Dr. Terple calls it ‘Dumbbell.’ It's divided into Dumbbell East and Dumbbell West. Frying Pan is the sort of roundish one with the long, thin peninsula projecting to the southwest. The one just coming into view now is Peanut, because — “

“I can see why,” I told him. It did look a little like a peanut. Hans was perceptive enough to recognize, probably from the tone of my voice, that I found this ge-ography— planetography? — lesson a little boring. Terple wasn’t. “Go on, Hans,” she said sharply when he hesitated. So he did.

Out of guest-politeness I sat still while he named every dot on the map for me, but when he came to the end, I did too. “That’s very nice,” I said, unhooking myself from my dining place. “Thanks for the dinner, June, but I think I’d better let you get your work done. Anyway, we’ll be seeing a lot of each other over the next five days.”

Every face I saw suddenly wore a bland expression, and Terple coughed. “Well, not quite five days,” she said uncomfortably. “I don’t know whether anyone told you this, but we’ll have to leave before the star blows.”

I stopped cold, one hand stuffing my napkin into its tied-down ring, the other holding on to the wall support. “There wasn’t anything about leaving early in your prospectus. Why wasn’t I told this?”

“It stands to reason, Klara,” she said doggedly. “As soon as the star begins its collapse, I’m shutting everything down and getting out of here. It’s too dangerous.”

I don’t like being surprised by the people who work for me. I gave her a look. “How can it be dangerous when we’re six thousand light-years away?”

She got obstinate. “Remember I’m responsible for the safety of this installation and its crew. I don’t think you have any idea what a supernova is like, Klara. It’s *huge*. Back in 1054 the Chinese astrologers could see it in *daylight* for almost the whole month of July, and they didn’t have our lensing to make it brighter.”

“So we’ll put on sunglasses.”

She said firmly, “We’ll *leave*. I’m not just talking about visible light. Even now, with six thousand years of cooling down after it popped, that thing’s still radiating all across the electromagnetic spectrum, from microwave to X-rays. We’re not going to want to be where all that radiation comes to a focus when it’s fresh.”

\* \* \* \*

As I was brushing my teeth, Hypatia spoke from behind me. “What Terple said makes sense, you know. Anything in the focus is going to get fried when the star goes supernova.”

I didn’t answer, so she tried another tactic. “Mark Rohrbeck is a good-looking man, isn’t he? He’s very confused right now, with the divorce and all, but I think he likes you.”

I looked at her in the mirror. She was in full simulation, leaning against the bathroom doorway with a little smile on her face. “He’s also half my age,” I pointed out.

“Oh, no, Klara,” she corrected me. “Not even a third, actually. Still, what difference does that make? Hans displayed his file for me. Genetically he’s very clean, as organic human beings go. Would you like to see it?”

“No.” I finished with the bathroom and turned to leave. Hypatia got gracefully out of my way just as though I couldn’t have walked right through her.

“Well, then,” she said. “Would you like something to eat? A nightcap?”

“What I would like is to go to sleep. Right now.”

She sighed. “Such a waste of time. Sooner or later you know you’re going to give up the meat, don’t you? Why wait? In machine simulation you can do anything you can do now, only better, and — “

“Enough,” I ordered. “What I’m going to do now is go to bed and dream about my lover coming closer every minute. Go away.”

The simulation disappeared, and her “Good night, then” came from empty air.

Hypatia doesn’t really go away when I tell her to, but she pretends she does. Part of the pretense is that she never acts as though she knows what I do in the privacy of my room.

It wasn’t exactly true that I intended to dream about Bill Tartch. If I were a romantic type, I might actually have been counting the seconds until my true love arrived. Oh, hell, maybe I was, a little bit, especially when I tucked myself into that huge circular bed and automatically reached out for



someone to touch and nobody was there. I do truly enjoy having a warm man's body to spoon up against when I drift off to sleep. But if I didn't have that, I also didn't have anybody snoring in my ear, or thrashing about, or talking to me when I first woke up and all I wanted was to huddle over a cup of coffee and a piece of grapefruit in peace.

Those were consoling thoughts — reasonably consoling—but they didn't do much for me this time. As soon as I put my head down, I was wide awake again.

Insomnia was one more of those meat-person flaws that disgusted Hypatia so. I didn't have to suffer from it. Hypatia keeps my bathroom medicine chest stocked with everything she imagines I might want in the middle of the night, including half a dozen different kinds of anti-insomnia pills, but I had a better idea than that. I popped the lid off my bedside stand, where I keep the manual controls I use when I don't want Hypatia to do something for me, and I accessed the synoptic I wanted to see.

I visited my island.

Its name is Raiwea — that's Rah-ee-wczy-uh, with the accent on the third syllable, the way the Polynesians say it—and it's the only place in the universe I ever miss when I'm away from it. It's not very big. It only amounts to a couple thousand hectares of dry land, but it's got palm trees and breadfruit trees and a pretty lagoon that's too shallow for the sharks ever to invade from the deep water outside the reef. And now, because I paid to put them there, it's got lots of clusters of pretty little bungalows with pretty, if imitation, thatched roofs, as well as plumbing and air conditioning and everything else that would make a person comfortable. And it's got playgrounds and game fields that are laid out for baseball or soccer or whatever a bunch of kids might need to work off excess animal energy. And it's got its own food factory nestled inside the reef, constantly churning out every variety of healthful food anyone wants to eat. And it's mine. It's all mine. Every square centimeter. I paid for it, and I've populated it with orphans and single women with babies from all over the world. When I go there, I'm Grandma Klara to about a hundred and fifty kids from newborns to teens, and when I'm some-where else I make it a point, every day or so, to access the surveillance systems and make sure the schools are functioning and the medical services are keeping everybody healthy, because I — all right, damn it! —because I love those kids. Every last one of them. And I swear they love me back.

Hypatia says they're my substitute for having a baby of my own.

Maybe they are. All the same, I do have a couple of my own ova stored in the Raiwea clinic's deep freeze. They've been there for a good many years now, but the doctors swear they're still one hundred percent viable and they'll keep them that way. The ova are there just in case I ever decide I really want to do that other disgustingly meat-person thing and give birth to my own genetically personal child...

But I've never met the man I wanted to be its father. Bill Tartch? Well, maybe. I had thought he might be for a while, anyway, but then I wasn't really so sure.

\* \* \* \*

When I was up and about the next morning, Hypatia greeted me with a fresh display of the Crabber planet. It was too big now to fit in my salon, but she had zeroed in on one particular coastline. In the center of the image was a blur that might have been manmade — personmade, I mean. "They're down to half-kilometer resolution now," she informed me. "That's pretty definitely a small city."

I inspected it. It pretty definitely was, but it was very definitely small. "Isn't there anything bigger?"

"I'm afraid not, Klara. Hans says the planet seems to be rather remarkably un-derpopulated, though it's not clear why. Will you be going over to the PhoenixCorp ship now?"

I shook my head. "Let them work in peace. We might as well do some work ourselves. What've you got for me?"

What she had for me was another sampling of some of the ventures I'd put money into at one time or another. There were the purely commercial ones such as the helium-3 mines on Luna, and the chain of food factories in the Bay of Bengal, and the desert-revivification project in the Sahara, and forty or fifty others; they weren't particularly interesting to me, but they were some of the projects that, no matter how much I spent, just kept getting me richer and richer every day.

Then we got to the ones I cared about. I looked in on the foundation Starfinder had talked about, the one for sending humans into the Core to meet with the Heechee who had stayed behind. And the scholarship program for young women like myself—like I had been once, long ago—who were stuck in dirty, drudging, dead-end jobs. Myself, I got out of it by means of dumb luck and the Gateway asteroid, but that wasn't an

option now. Maybe a decent education was.

Along about then, Hypatia cleared her throat in the manner that means there's something she wants to talk about. I guessed wrong. I guessed she wanted to discuss my island, so I played the game. "Oh, by the way," I said, "I accessed Raiwea last night after I went to bed."

"Really?" she said, just as though she hadn't known it all along. "How are things?"

I went through the motions of telling her which kids were about ready to leave, and how there were eighteen new ones who had been located by the various agencies I did business with, ready to be brought to the island next time I was in the neighborhood. As she always did, whether she meant it or not, she clucked approvingly. Her simulation was looking faintly amused, though. I took it as a challenge. "So you see there's one thing we animals can do that you can't," I told her. "We can have babies."

"Or, as in your own case at least so far, not," she said agreeably. "That wasn't what I was going to tell you, though."

"Oh?"

"I just wanted to mention that Mr. Tartch's ship is going to dock in about an hour. He isn't coming alone."

Sometimes Hypatia is almost too idiosyncratically human, and more than once I've thought about getting her program changed. The tone of her voice warned me that she had something more to tell. I said tentatively, "That's not surprising. Sometimes he needs to bring a crew with him."

"Of course he does, Klara," she said cheerfully. "There's only one of them this time, though. And she's very pretty."

\* \* \* \*

## CHAPTER V

The very pretty assistant was very pretty, all right, and she looked to be about sixteen years old. No, that's not true. She looked a lot better than sixteen years old. I don't believe I had skin like that even when I was a newborn baby. She wore no makeup, and needed none. She had on a decorous one-piece jumpsuit that covered her from thigh to neck and left

no doubt what was inside. Her name was Denys. When I got there —I had taken my time, because I didn't want Bill to think I was eager—all three of PhoenixCorp's males were hanging around, watching her like vultures sniffing carrion. It wasn't just that she looked the way she looked. She was also fresh meat, for a crew that had been getting pretty bored with each other.

Of course, I had been fresh meat, too, and there had been no signs of that kind of testosterone rush when I arrived. But then, I didn't look like Denys. Bill didn't seem to notice. He had already set up for his opening teaser, and Denys was playing his quaint autocameras for him. As they panned around the entrance chamber and settled on his face, wearing its most friendly and intelligent expression, he began to speak to the masses:

“Wilhelm Tartch here again, where PhoenixCorp is getting ready to bring a lost race of intelligent beings back to life, and here to help me once again” —one of the cameras swung around as Denys cued it toward me —“I have the good luck to have my beautiful fiancée, Gelle-Klara Moynlin, with me.”

I gave him a look, because whatever I was to Wilhelm Tartch, I definitely wasn't planning to marry him. He tipped me a cheeky wink and went right on:

“As you all remember, before the Heechee ran away to hide in the Core, they surveyed most of the galaxy, looking for other intelligent races. They didn't find any. When they visited Earth they found the australopithecines, but they were a long way from being modern humans. They hadn't even developed language yet. And here, on this planet” —that view of the Crabber planet, presupernova, appeared behind him — “they found another primitive race that they thought might someday become both intelligent and civilized. Well, perhaps these Crabbers, as the PhoenixCorp people call them, did. But the Heechee weren't around to see it, and neither are we, because they had some bad luck.

“There were two stars in their planet's system, a red dwarf and a bright type-A giant. Over the millennia, as these lost people were struggling toward civilization, the big star was losing mass, which was being sucked into the smaller one —and then, without warning, the small one reached critical mass. It exploded —and the people, along with their planet and all their works, were instantly obliterated in the supernova blast.”

He stopped there, gazing toward Denys until she called, “Got it.” Then he kicked himself toward me, arms outstretched for a hug, a big grin on his

face. When we connected, he buried his face in my neck and whispered, “Oh, Klaretta, we’ve been away from each other too long!”

Bill Tartch is a good hugger. His arms felt fine around me, and his big, male body felt good against mine. “But we’re together now,” I told him ... as I looked over his shoulder at Denys — who was regarding us with an affectionate and wholly unjealous smile.

So that part might not be much of a problem, at that. I decided not to worry about it. Anyway, the resolution of the Crabber planet was getting better and better, and that was what we were here for, after all.

\* \* \* \*

What the Crabber planet had a lot of was water. As the planet turned on its axis, the continental shore had disappeared into the nighttime side of the world, and what we were looking at was mostly ocean.

Bill Tartch wasn’t pleased. “Is that all we’re going to see?” he demanded of the room at large. “I expected at least some kind of a city.”

Terple answered. “A small city—probably. Anyway, that’s what it looked like before we lost it; I can show you that much if you like. Hans, go back to when that object was still in sight.”

The maybe-city didn’t look any better the second time I saw it, and it didn’t impress Bill. He made a little tongue-click of annoyance. “You, shipmind! Can’t you enhance the image for me?”

“That is enhanced, Mr. Tartch,” Hans told him pleasantly. “However, we have somewhat better resolution now, and I’ve been tracking it in the infrared. There’s a little more detail”—the continental margin appeared for us, hazily delineated because of the differences in temperature between water and land, and we zoomed in on the object—”but, as you see, there are hot spots that I have not yet been able to identify.”

There were. *Big* ones, and very bright. What was encouraging, considering what we were looking for, was that some of them seemed to be fairly geometrical in shape, triangles and rectangles. But what were they?

“Christmas decorations?” Bill guessed. “You know, I mean not really Christmas, but with the houses all lit up for some holiday or other?”

"I don't think so, Mr. Tartch," Hans said judiciously. "There's not much optical light; what you're seeing is heat."

"Keeping themselves warm in the winter?"

"We don't know if it's their winter, Mr. Tartch, and that isn't probable in any case. Those sources read out at up to around three hundred degrees Celsius. That's almost forest-fire temperature."

Bill looked puzzled. "Slash-and-burn agriculture? Or maybe some kind of in-dustry?"

"We can't say yet, Mr. Tartch. If it were actual combustion, there should be more visible light; but there's very little. We'll simply have to wait for better data. Meanwhile, however, there's something else you might like to see." The scene we were viewing skittered across the face of the planet—huge cloud banks, a couple of islands, more cloud—and came to rest on a patch of ocean. In its center was a tiny blur of something that looked grayish when it looked like anything at all; it seemed to flicker in and out of sight, at the very limit of visibility.

"Clouds?" Bill guessed.

"No, Mr. Tartch. I believe it is a group of objects of some kind, and they are in motion—vectoring approximately seventy-one degrees, or, as you would say, a little north of east. They must be quite large, or we would not pick up anything at all. They may be ships, although their rate of motion is too high for anything but a hydrofoil or ground-effect craft. If they are still in sight when the mirror is more nearly complete, we should be able to resolve them easily enough."

"Which will be when?"

Hans gave us that phony couple-of-seconds pause before he answered. "There is a small new problem about that, Mr. Tartch," he said apologetically. "Some of the installed mirror plates have been subjected to thermal shock, and they are no longer in exact fit. Most of the installation machines have had to be delivered to adjust them, and so it will be some time before we can go on with completing the mirror. A few hours only, I estimate."

Bill looked at me and I looked at him. "Well, shit," he said. "What else is going to go wrong?"

\* \* \* \*

What had gone wrong that time wasn't June Terple's fault. She said it was, though. She said that she was the person in charge of the whole operation, so everything that happened was her responsibility, and she shouldn't have allowed Ibarruru to override Hans's controls. And Julia Ibarruru was tearfully repentant. "Starminder told me the Heechee had identified eleven other planets in the Crabber system; I was just checking to see if there were any signs of life on any of them, and I'm afraid that for a minute I let the system's focus get too close to the star."

It could have been worse. I told them not to worry about it and invited all three of them to my ship for a drink. That made my so-called fiancé's eyebrows rise, because he had certainly been expecting to be the first person I welcomed aboard. He was philosophical about it, though. "I'll see you later," he said, and if none of the women knew what he meant by that, it could only have been because they'd never seen a leer before. Then he led Denys off to interview some of PhoenixCorp's other people.

Which was pretty much what I was planning for myself. Hypatia had set out tea things on one table, and dry sherry on another, but before we sat down to either, I had to give all three of the women the usual guided tour. The sudden return to normal gravity was a burden for them, but they limped admiringly through the guest bedroom, exclaimed at the kitchen — never used by me, but installed just in case I ever wanted to do any of that stuff myself — and were blown away by my personal bathroom. Whirlbath, bidet, big onyx tub, mirror walls — Bill Tartch always said it looked like a whore's dream of heaven, and he hadn't been the first guest to make that observation. I don't suppose the PhoenixCorp women had ever seen anything like it. I let them look. I even let them peek into the cabinets of perfumes and toiletries. "Oh, musk oil!" Terple cried. "But it's real! That's so expensive."

"I don't wear it anymore. Take it, if you like," I said and, for the grand finale, opened the door to my bedroom.

When at last we got to the tea, sherry, and conversation, Ibarruru's first remark was, "Mr. Tartch seemed like a very interesting man." She didn't spell out the connection, but I knew it was that huge bed that was in her mind. So we chatted about Mr. Tartch and his glamorous p-vision career, and how Terple had grown up with the stories of the Gateway prospectors on every day's news, and how Ibarruru had dreamed of an opportunity like this — "Astronomy's really almost a lost art on Earth, you know," she told me. "Now we have all the Heechee data, so there's no point anymore in

wasting time with telescopes and probes.”

“So what does an astronomer do when there’s no astronomy to be done?” I asked, being polite.

She said ruefully, “I teach an undergraduate course in astronomy at a community college in Maryland. For people who will never do any astronomy, because if there’s anything somebody really wants to see, why, they just get in a ship and go out and look at it.”

“As I did, Ms. Moynlin,” said Starminder, with the Heechee equivalent of a smile.

That was what I was waiting for. If there was a place in the universe I still wanted to see, it was her home in the Core. “You must miss the Core,” I told her. “All those nearby stars, so bright—what we have here must look pretty skimpy to you.”

“Oh, no,” she said, being polite, “this is quite nice. For a change. What I really miss is my family.”

It had never occurred to me that she had a family, but, yes, she had left a mate and two young offspring behind when she came out. It was a difficult decision, but she couldn’t resist the adventure. Miss them? Of course she missed them! Miss her? She looked surprised at that. “Why, no, Ms Moynlin, they won’t be missing me. They’re asleep for the night. I’ll be back long before they wake up. Time dilation, you see. I’m only going to stay out here for a year or two.”

Ibarruru said nervously, “That’s the part that worries me about going to the Core, Starminder. I’m not young anymore, and I know that if I went for even a few days, nearly everyone I know would be gone when I got back. No, not just ‘nearly’ everyone,” she corrected herself. “What is it, forty thousand to one? So a week there would be nearly a thousand years back home.” Then she turned to the Heechee female. “But even if we can’t go ourselves, you can tell us about it, Starminder. Would you like to tell Ms. Moynlin what it’s like in the Core?”

\* \* \* \*

It was what I wanted to hear, too. I’d heard it often enough before, but I listened as long as Starminder was willing to talk. Which was a lot, because she was definitely homesick.



Would it really matter if I spent a week in the Core? Or a month, or a year, for that matter? I'd miss my kids on the island, of course, but they'd be taken care of, and so would everything else that mattered to me. And there wasn't any other human being in the universe that I cared enough about to miss for more than a day.

I was surprised when Hypatia spoke up out of thin air. "Ms. Moynlin"—formal because of the company—"there's a call for you." And she displayed Bill Tartch's face.

I could see by the background that he was in his own ship, and he looked all bright and fresh and grinning at me. "Permission to come aboard, hon?" he asked.

That produced a quick reaction among my guests.

"Oh," said Ibarruru, collecting herself. "Well, it's time we got back to work anyway, isn't it, June?" She was sounding arch. Terple wasn't; she simply got up, and Starminder followed her example.

"You needn't leave," I said.

"But of course we must," said Terple. "Julia's right. Thank you for the tea and, uh, things."

And they were gone, leaving me to be alone with my lover.

\* \* \* \*

## CHAPTER VI

"He's been primping for the last hour," Hypatia reported in my ear. "Showered, shaved, dressed up. And he put on that musk cologne that he thinks you like."

"I do like it," I said. "On him. Let me see you when I'm talking to you."

She appeared obediently, reclining on the couch Ibarruru had just left. "I'd say the man's looking to get laid," she observed. "Again."

I didn't choose to pick up on the "again." That word was evidence of one of Hypatia's more annoying traits, of which she has not quite enough to make me have her reprogrammed. When I chose Hypatia of Alexandria as

a personality for my shipmind, it seemed to be a good idea at the time. But my own Hypatia took it seriously. That's what happens when you get yourself a really powerful shipmind; she throws herself into the part. The first thing Hypatia did was look up her template and model herself as close to the original as she thought I would stand — including such details as the fact that the original Hypatia really hated men.

“So, do you want me out of the way so you can oblige him?” she asked sociably.

“No,” I said. “You stay.”

“That's my girl. You ask me, sexual intercourse is greatly overrated anyway.”

“That's because you never had any,” I told her. “By which I mean neither you, my pet program, nor the semimythical human woman I modeled you after, who died a virgin and is said to have shoved her used menstrual cloths in the face of one persistent suitor to turn him off.”

“Malicious myth,” she said comfortably. “Spread by the Christians after they murdered her. Anyway, here he comes.”

I would have been willing to bet that the first words out of Bill Tartch's mouth would be *Alone at last!* accompanied by a big grin and a lunge for me. I would have half won. He didn't say anything at all, just spread his arms and lurched toward me, grin and all.

Then he saw Hypatia, sprawled on the couch. “Oh,” he said, stumbling as he came to a stop —there evidently wasn't any gravity in his rental ship, either. “I thought we'd be alone.”

“Not right now, sweetie,” I said. “But it's nice to see you.”

“Me, too.” He thought for a moment, and I could see him changing gears: All right, the lady doesn't want what I want right now, so what else can we do? That's one of those good-and-bad things about Bill Tartch. He does what I want, and none of this sweeping-her-off-her-feet stuff. Viewing it as good, it means he's considerate and sweet. Viewing it the other way—the way Hypatia chooses to view it—he's a spineless wretch, sucking up to somebody who can do him good.

While I was considering which way to view it, Bill snapped his fingers. “I know,” he said, brightening. “I've been wanting to do a real interview with

you anyway. That all right? Hypatia, you can record it for me, can't you?"

Hypatia didn't answer, just looked sulkily at me.

"Do what he says," I ordered. But Bill was having second thoughts.

"Maybe not," he said, cheerfully resigned to the fact that she wouldn't take orders from him. "She'd probably screw it up on purpose for me anyway, so I guess we'd better get Denys in here."

\* \* \* \*

It didn't take Denys much more than a minute to arrive, with those quaint little cameras and all. I did my best to be gracious and comradely. "Oh, yes, clip them on anywhere," I said—in my ship's gravity, the cameras wouldn't just float. "On the backs of the chairs? Sure. If they mess the fabric a little, Hypatia will fix it right up." I didn't look at Hypatia, just gestured to her to get herself out of sight. She did without protest.

Bill had planted himself next to me and was holding my hand. I didn't pull it away. It took Denys a little while to get all the cameras in place, Bill gazing tolerantly at the way she was doing it and not offering to help. When she announced she was ready, the interview began.

It was a typical Wilhelm Tartch interview, meaning that he did most of the talking. He rehearsed our entire history for the cameras in one uninterrupted monologue; my part was to smile attentively as it was going on. Then he got to Phoenix.

"We're here to see the results of this giant explosion that took place more than a thousand years ago—What's the matter, Klara?"

He was watching my face, and I knew what he was seeing. "Turn off your cameras, Bill. You need to get your facts straight. It happened a lot longer than a thousand years ago."

He shook his head at me tolerantly. "That's close enough for the audience," he explained. "I'm not giving an astronomy lesson here. The star blew up in 1054, right?"

"It was in 1054 that the Chinese astronomers saw it. That's the year when the light from the supernova got as far as our neighborhood, but it took about five thousand years to get there. Didn't you do your homework?"

“We must’ve missed that little bit, hon,” he said, giving me his best ruefully apologetic smile. “All right, Denys. Take it from the last little bit. We’ll put in some shots of the supernova to cover the transition. Ready? Then go. This giant explosion took place many thousands of years ago, destroying a civilization that might in some ways almost have become the equal of our own. What were they like, these people the Phoenix investigators call ‘Crabbers’? No one has ever known. When the old Heechee visited their planet long ago, they were still animallike primitives—Denys, we’ll put in some of those old Heechee files here—but the Heechee thought they had the potential to develop cognitive intelligence and even civilization. Did they ever fulfill this promise? Did they come to dominate their world as the human race did our Earth? Did they develop science and art and culture of their own? We know from the tantalizing hints we’ve seen so far that this may be so. Now, through the generosity of Gelle-Klara Moynlin, who is here with me, we are at last going to see for ourselves what these tragically doomed people achieved before their star exploded without warning, cutting them off—Oh, come on, Klara. What is it this time?”

“We don’t know if they had any warning or not, do we? That’s one of the things we’re trying to find out.”

Denys cleared her throat. She said diffidently, “Bill, maybe you should let me do a little more background research before you finish this interview.”

My lover gave her a petulant little grimace. “Oh, all right. I suppose there’s nothing else to do.”

I heard the invisible little cough that meant Hypatia had something to say to me, so I said to the air, “Hypatia?”

She picked up her cue. “The PhoenixCorp shipmind tells me they’re back at work on the dish, and they’re getting somewhat better magnification now. There are some new views you may want to see. Shall I display here?”

Bill seemed slightly mollified. He looked at me. “What do you think, Klara?”

It was the wrong question to ask me. I didn’t want to tell him what I was thinking.

For that matter, I didn’t want to be thinking it at all. All right, he and this

little Denys lollipop hadn't done any of their backgrounding on the way out to Phoenix. So what, exactly, had they been doing with their time?

I said, "No, I think I'd rather see it on the PhoenixCorp ship. You two go ahead. I'll follow in a minute." And as soon as they were out of sight. I turned around, and Hypatia was sitting in the chair Denys had just left, looking smug.

"Can I do something for you, Klara?" she asked solicitously.

She could, but I wasn't ready to ask her for it. I asked her for something else instead. "Can you show me the interior of Bill's ship?"

"Of course, Klara." And there it was, displayed for me, Hypatia guiding my point of view all through it.

It wasn't much. The net obviously wasn't spending any more than it had to on Bill's creature comfort. It was so old that it had all that Heechee drive stuff out in the open; when I designed my own ship, I made sure all that ugliness was tucked away out of sight, like the heating system in a condo. The important fact was that it had two sleeping compartments, one clearly Denys's, the other definitely Bill's. Both had unmade beds. Evidently the rental's shipmind wasn't up to much housekeeping, and neither was Denys. There was no indication that they might have been visiting back and forth.

I gave up. "You've been dying to tell me about them ever since they got here," I said to Hypatia. "So tell me."

She gave me that wondering look. "Tell you what exactly, Klara?"

"Tell me what was going on on Bill's ship, for Christ's sake! I know you know."

She looked slightly miffed, the way she always did when Christ's name was mentioned, but she said, "It is true that I accessed Mr. Tartch's shipmind as a routine precaution. It's a pretty cheap-jack job, about what you'd expect in a rental. It had privacy locks all over it, but nothing that I couldn't—"

I snarled at her, "Tell me! *Did they?*"

She made an expression of distaste. "Oh, yes, hon, they certainly did. All the way out here. Like dogs in rut."

I looked around the room at the wineglasses and cups and the cushions that had been disturbed by someone sitting on them. "I'm going to the ship. Clean up this mess while I'm gone," I ordered, and checked my face in the mirror.

It looked just as it always looked, as though nothing were different.

Well, nothing was, really, was it? What did it matter if Bill chose to bed this Denys, or any number of Denyses, when I wasn't around? It wasn't as though I had been planning to *marry* the guy.

\* \* \* \*

## CHAPTER VII

None of the crew was in the entrance lock when I came to the PhoenixCorp ship, but I could hear them. They were all gathered in the dining hall, laughing and chattering excitedly. When I got there, I saw that the room was darkened. They were all poking at virtuals of one scene or another as Hans displayed them, and no one noticed me as I came in.

I hooked myself inconspicuously to a belt near the door and looked around. I saw Bill and his sperm receptacle of the moment hooked chastely apart, Denys chirping at Mason-Manley, Bill talking into his recorders. Mason-Manley was squeezing Denys's shoulder excitedly, presumably because he was caught up in the euphoria of the moment, but he seemed to be enjoying touching her, too. If Bill noticed, he didn't appear to mind. But then, Bill was not a jealous type; that was one of the things I liked about him.

Until recently I hadn't thought that I was, either.

Well, I told myself, I wasn't. It wasn't a question of jealousy. It was a question of— oh, call it good manners; if Bill chose to bed a bimbo now and then, that was his business, but it did not excuse his hauling the little tart all the way from Earth to shove her in my face.

A meter or so away from me, Mark Rohrbeck was watching the pictures, looking a lot less gloomy than usual. When he saw me at last, he waved and pointed. "Look, Ms. Moynlin!" he cried. "Blimps!"

So I finally got around to looking at the display. In the sector he was

indicating, we were looking down on one of the Crabber planet's oceans. There were a lot of clouds, but some areas had only scattered puffs. And there among them were eight fat little silver sausages, in a V formation, that surely were far too hard-edged and uniform in shape to be clouds.

"These are the objects we viewed before, Ms. Moynlin," Hans's voice informed me. "Now we can discriminate the individual elements, and they are certainly artifacts."

"Sure, but why do you say they're blimps? How do you know they aren't ships of some kind?" I asked, and then said at once, "No, cancel that," as I figured it out for myself. If they had been surface vessels, they would have produced some sort of wake in the water. They were aircraft, all right, so I changed the question to, "Where are they going, do you think?"

"Wait a minute," June Terple said. "Hans, display the projection for Ms. Moynlin."

That sheet of ocean disappeared, and in its place was a globe of the Crabber planet, its seas in blue, land masses in gray. Eight stylized little blimp figures, greatly out of proportion, were over the ocean. From them a silvery line extended to the northeast, with another line, this one golden, going back past the day-night terminator toward the southwest. Terple said, "It looks like the blimps came from around that group of islands at the end of the gold course-line, and they're heading toward the Dumbbell continents up on the right. Unfortunately, those are pretty far north. We can't get a good picture of them from here, but Hans has enhanced some of the data on the island the blimps came from. Hans?"

The globe disappeared. Now we were looking down on one of those greenish infrared scenes: shoreline, bay—and something burning around the bay. Once again the outlines of the burning areas were geometrically unnatural. "As we speculated, it is almost certainly a community, Ms. Moynlin," Hans informed me. "However, it seems to have suffered some catastrophe, similar to what we observed on the continent that is now out of sight."

"What kind of catastrophe?" I demanded.

Hans was all apologetic. "We simply don't have the data yet, Ms. Moynlin. A great fire, one might conjecture. I'm sure it will make sense when we have better resolution — in a few hours, perhaps. I'll keep you posted."

"Please do," I said. And then, without planning it, I, found myself

saying, "I think I'll go back to my ship and lie down for a while."

"But you just got here," Mark Rohrbeck said, surprised and, I thought with some pleasure, maybe a little disappointed. Bill Tartch looked suddenly happy and began to unhook himself from his perch. I gave a little shake of the head to both of them.

"I'm sorry. I just want to rest," I said. "It's been an exhausting few days."

\* \* \* \*

That wasn't particularly true, of course —not any part of it. I wasn't really tired, and I didn't want to rest. I just wanted to be by myself, or at any rate with no company but Hypatia, which comes to pretty much the same thing.

As I came into my ship, she greeted me in motherly mode. "Too many people, hon?" she asked. "Shall I make you a drink?"

I shook my head to the drink, but she was right about the other part of it. "Funny thing," I said, sprawling on the couch. "The more people I meet, the fewer I am comfortable around."

"Meat people are generally boring," she agreed. "How about a cup of tea?"

I shrugged, and immediately heard the activity begin in the kitchen. Hypatia had her faults, but she was a pretty good mom when I needed her to be. I lay back on the couch and gazed at the ceiling. "You know what?" I said. "I'm be-ginning to think I ought to settle down on the island."

"You could do that, yes," she said diplomatically. Then, because she was Hy-patia, she added, "Let's see, the last time you were there, you stayed exactly eleven days, wasn't it? About six months ago?"

She had made me feel defensive —again. I said. "I had things to do."

"Of course you did. Then the time before that wasn't quite that long, was it? Just six days —and that was over a year ago."

"You've made your point, Hypatia. Talk about something else."

"Sure thing, boss." So she did. Mostly what she chose to talk about was what my various holdings had been doing in the few hours since I'd



checked them last. I wasn't listening. After a few minutes of it, I swallowed the tea she'd made for me and stood up. "I'm going to soak in the tub for a while."

"I'll run it for you, hon. Hon? They've got some new pictures from the Crabber planet if you want to see them while you soak."

"Why not?" And by the time I'd shucked my clothes the big onyx tub was full, the temperature perfect as always, and one corner of the bathroom was concealed by one of Hypatia's simulations.

The new display was almost filled by what looked like hundreds, maybe thousands, of tiny buildings. We were looking down at them from something like a forty-five-degree angle, and I couldn't make out many details. Their sun must have been nearly overhead, because there weren't many shadows to bring out details.

"This is the biggest city they've found yet," Hypatia informed me. "It's inland on the western part of the squarish continent in the southern hemisphere, where two big rivers come together. If you look close, you'll see there's a suggestion of things moving in the streets, but we can't make out just what yet. However—"

I stopped her. "Skip the commentary," I ordered. "Just keep showing me the pictures. If I have any questions, I'll ask."

"If that's what you want, hon." She sounded aggrieved. Hypatia doesn't like to be told to shut up, but she did.

The pictures kept coming, one city after another, now a bay with what looked like surface ships of some kind moored in it, now some more blimps sailing peacefully along, now what might have been a wide-gauge railroad with a train steaming over a bridge. I couldn't really see the tracks, only the bridge and a hazy line that stretched before and after it across the countryside. What I could see best was the locomotive, and most of all the long white trail of steam from its stack.

I watched for a while, then waved the display off. I closed my eyes and lay back to let the sweet-smelling foamy waters make me feel whole and content again. As I had done many thousands of times, sometimes with success.

This was one of the successes. The hot tub did its work. I felt myself drifting off to a relaxed and welcome sleep. ...

And then, suddenly, a vagrant thought crossed my mind, and I wasn't relaxed anymore.

I got out of the tub and climbed into the shower stall, turning it on full; I let cold water hammer at me for a while, then changed it to hot. When I got out, I pulled on a robe.

As I was drying my hair, the door opened and Hypatia appeared, looking at me with concern. "I'm afraid what I told you about Tartch upset you, hon," she said, oozing with compassion. "You don't really care what he does, though, do you?"

I said, "Of course not," wondering if it were true.

"That's my girl," she said approvingly. "There are some new scenes, too."

They appeared; she didn't wait to see if I wanted them on. I watched the changing scenes for a while, then decided I didn't. I turned to Hypatia. "Turn it off," I said. "I want to ask you something."

She didn't move, but the scene disappeared. "What's that, Klara?"

"While I was dozing in the tub, I thought for a moment I might fall asleep, and slip down into the water and drown. Then I thought you surely wouldn't let that happen, because you'd be watching, wouldn't you?"

"I'm always aware of any problems that confront you, Klara."

"And then it occurred to me that you might be tempted to let me go ahead and drown, just so you could get me into that machine storage you're always trying to sell me. So I got out of the tub and into the shower."

I pulled my hair back and fastened it with a barrette, watching her. She didn't speak, just stood there with her usual benign and thoughtful expression. "So, would you?" I demanded.

She looked surprised. "You mean would I deliberately let you drown? Oh, I don't think I could do that, Klara. As a general rule I'm not programmed to go against your wishes, not even if it were for your own good. That would be for your good, you know. Machine storage would mean eternal life for you, Klara, or as close as makes no difference. And no more of the sordid little concerns of the meat that cause you so much

distress.”

I turned my back on her and went into my bedroom to dress. She followed, in her excellent simulation of walking. What I wanted to know was how general her general rule was, and what she would have deemed a permissible exception. But as I opened my mouth to ask her, she spoke up.

“Oh, Klara,” she said. “They’ve found something of interest. Let me show you.” She didn’t wait for a response; at once the end of the room lit up.

We were looking again at that first little fleet of blimps. They were nearly at the coast, but they weren’t in their tidy V formation anymore. They were scattered over the sky, and two of them were falling to the sea, blazing with great gouts of flame. Small things I couldn’t quite make out were buzzing around and between them.

“My God,” I said. “Something’s shooting them down!”

Hypatia nodded. “So it would appear, Klara. It looks as though the Crabbers’ blimps are filled with hydrogen, to burn the way they do. That suggests a rather low level of technological achievement, but give them credit. They aren’t primi-tives, anyway. They’re definitely civilized enough to be having themselves a pretty violent little war.”

\* \* \* \*

## CHAPTER VIII

There wasn’t any doubt about it. The Crabbers were industriously killing each other in a kind of aerial combat that was right out of the old stories of World War I. I couldn’t see much of the planes that were shooting the blimps down, but they were really there, and what was going on was a real old-fashioned dogfight.

I don’t know what I had hoped to see when we brought the long-dead Crabbers back to some kind of life. But that definitely wasn’t it. When the scenes changed — Hans had been assiduous in zooming down to wherever on the planet’s surface things were going on — it didn’t improve. It got worse. I saw a harbor crammed with surface vessels, where a great river joined the sea; but some of the ships were on fire, and others appeared to be sinking. “Submarines did that, I think,” Hypatia judged. “Or it

could possibly be from bombing planes or mines, but my money's on submarines." Those strange patterns of heat in the cities weren't a mystery any longer—the cities had been burned to the ground by incendiaries, leaving only glowing coals. Then, when we were looking down, on a plain where flashes of white and reddish light sparkled all over the area, we couldn't see what was making them, but Hypatia had a guess for that, too. "Why," she said, sounding interested, "I do believe we're looking at a large-scale tank battle."

And so on, and on.

So Hans's promise had been kept. As soon as the magnification got a little better, it all did begin to make sense, just as the shipmind had promised. (I mean, if war makes any sense in the first place, that's the sense the pictures made.) The robots on the dish were still slaving away at adding the final mirror segments, and the pictures kept getting better and better.

Well, I don't know if I mean "better," exactly. The pictures were certainly clearer and more detailed, in some cases I would have to say even more excruciatingly detailed. But what they all showed was rack and ruin and death and destruction.

And their war was so pointless! They didn't have to bother killing each other. Their star would do it for them soon enough. All unknowing, every one of those Crabbers was racing toward a frightful death as their sun burst over them.

An hour earlier I had been pitying them for the fate that awaited them. But now I couldn't say I thought their fate was all that unjust.

Hypatia was looking at me in that motherly way she sometimes assumes. "I'm afraid all this is disturbing for you, Klara," she murmured. "Would it cheer you up to invite Mr. Tartch aboard? He's calling. He says he wants to talk to you about the new pictures."

"Sure he does," I said, pretty sure that Bill really wanted to talk about why he didn't deserve being treated so standoffishly by me. "No. Tell him I'm asleep and don't want to be disturbed. And leave me alone for a while."

\* \* \* \*

As soon as she had left and the door had closed behind her, I actually did throw myself onto my big, round bed. I didn't sleep, though. I just lay there,

staring at myself in the mirror on the ceiling and doing my best not to think about anything.

Unfortunately, that's not something I'm good at. I could get myself to not think about those damn nasty Crabbers, but then I found my mind quickly turned itself to thinking whether it was better to let Bill Tartch hang or tell him to come in and then have a knock-down, drag-out, breaking-up fight with him to get it all over with. And when I made myself stop thinking about Bill Tartch, I found myself wondering why I'd squandered a fairly hefty chunk of my surplus cash on poking into the lives of a race that didn't know any better than to take a reasonably nice little planet and turn it into a charnel house.

I thought of calling Hypatia back in for another dull session of playing with my investments. I thought wistfully of taking another look at my island. And then I thought, screw it. I got myself into this thing. I might as well go ahead and see it through. . . .

But a more pleasant thought had been stirring in the background of my mind, so first there was something else I wanted from Hypatia.

I put on the rest of my clothes and went out to where she was reclining grace-fully on the couch, just as though she'd been lounging there all along. I'm sure she had been watching those charnel-house scenes as attentively as anyone on the Phoenix ship—the difference being, of course, that Hypatia didn't have to bother with turning the optical display on for her own needs. But I needed it, so she asked politely, "Shall I display the data for you again, Klara?"

"In a minute," I said. "First, tell me all about Mark Rohrbeck."

I expected one of those tolerantly knowing looks from her. I got it, too. But she obediently began to recite all his stats. Mark's parents had died when he was young, and he had been brought up by his grandfather, who had once made his living as a fisherman on Lake Superior. "Mostly the old man fished for sea lampreys — know what they are, Klara? They're ugly things. They have big sucking disks instead of jaws. They attach themselves to other fish and suck their guts out until they die. I don't think you'd want to eat a sea lamprey yourself, but they were about all that was left in the lake. Mr. Rohrbeck sold them for export to Europe —people there thought they were a delicacy. They said they tasted like escargot. Then, of course, the food factories came along and put him out of business — "

"Get back to Mark Rohrbeck," I ordered. "I want to hear about the

man himself. Briefly.”

“Oh. Sorry. Well, he got a scholarship at the University of Minnesota, did well, went on to grad school at MIT, made a pretty fair reputation in computer science, married, had two kids, but then his wife decided there was a dentist she liked better than Rohrbeck, so she dumped him. And as I’ve mentioned before,” she said appreciatively, “he does have really great genes. Does that cover it?”

I mulled that over for a moment, then said, “Just about. Don’t go drawing any conclusions from this, do you hear?”

“Certainly, Klara,” she said, but she still had that look.

I sighed. “All right. Now turn that damn thing back on.”

“Of course, Klara,” she said, unsurprised, and did. “I’m afraid it hasn’t been getting any better.”

\* \* \* \*

It hadn’t. It was just more of the same. I watched doggedly for a while, and then I said, “All right, Hypatia. I’ve seen enough.”

She made it disappear, looking at me curiously. “There’ll be better images when they finish with the mirror. By then we should be able to see actual individual Crabbers.”

“Lovely,” I said, not meaning it, and then I burst out. “My God, what’s the matter with those people? There’s plenty of room on the planet for all of them. Why didn’t they just stay home and live in peace?”

It wasn’t meant to be a real question, but Hypatia answered it for me anyway. “What do you expect? They’re meat people,” she said succinctly.

I wasn’t letting her get away with that. “Come on, Hypatia! Human beings are meat people, too, and we don’t go tearing halfway around the world just to kill each other!”

“Oh, do you not? What a short memory you have, Klara dear. Think of those twentieth-century world wars. Think of the Crusades, tens of thousands of Euro-peans dragging themselves all the way around the Mediterranean Sea to kill as many Moslems as they could. Think of the Spanish conquistadors, murdering their way across the Americas. Of

course,” she added’, “those people were all Christians.”

I blinked at her. “You think what we’re looking at is a religious war?”

She shrugged gracefully. “Who knows? Meat people don’t need reasons to kill each other, dear.”

\* \* \* \*

## CHAPTER IX

Hypatia had been right about what gravitational lensing plus that big mirror could do.

By the time the mirror was complete, we could make out plenty of detail. We were even able to see individual centaur-like Crabbers —the same build, four legs and upright torso, that they’d inherited from the primitives I’d seen, but no longer very primitive at all.

Well, what I mean is that sometimes we could see them, anyway. Not always. The conditions had to be right. We couldn’t see them when it was night on their part of the planet, of course, except in those ghostly-looking IR views, and we couldn’t see them at all when they were blanketed with clouds we couldn’t peer through. But we could see enough. More than enough, as far as I was concerned.

The PhoenixCorp crew was going crazy trying to keep up with the incoming data. Bill seemed to have decided to be patient with my unpredictable moods, so he paid me only absentminded attention. He kept busy working. He and Denys were ecstatically interrupting everyone in their jobs so that he could record their spot reactions, while the crew did their best to get on with their jobs anyway. June Terple stopped sleeping entirely, torn between watching the new images as they arrived and nagging her shipmind to make sure we would have warning in time to get the hell out of there before the star blew.

Only Mark Rohrbeck seemed to have time on his hands. Which was just the way I wanted it.

I found him in the otherwise empty sleep chamber, where Hans had obligingly set up a duplicate show of the incoming scenes for him. Mark’s main area of concern was the shipmind and the functions it controlled, but all those things were working smoothly without his attention. He was

spending his time gazing morosely in the general direction of the pictures.

I hooked myself up nearby. “Nasty, isn’t it?” I said sociably, to cheer him up.

He didn’t want to be cheered. “You mean the Crabbers?” Although his eyes had been on the display, his mind evidently hadn’t. He thought it over for a moment, then gave his verdict. “Oh, I guess it’s nasty enough, all right. It isn’t exactly what we were all hoping for, that’s for sure. But it all happened a long time ago, though, didn’t it?”

“And you’ve got more immediate problems on your mind,” I offered helpfully.

He gave me a gloomy imitation of a smile. “I see the shipminds have been gossiping again. Well, it isn’t losing Doris that bothers me so much,” he said after a moment. “I mean, that hurt, too. I thought I loved her, but—Well, it didn’t work out, did it? Now she’s got this other guy, so what the hell? But” —he swallowed unhappily—“the thing is, she’s keeping the kids.”

He was not only a nice man, he was beginning to touch my heart. I said, sounding sympathetic and suddenly feeling that way, too, “And you miss them?”

“Hell! I’ve been missing them most of the time since they were born,” he said self-accusingly. “I guess that’s what went wrong. I’ve been away working so much, I suppose I can’t blame Doris for getting her lovemaking from somebody else.”

That triggered something in me that I hadn’t known was there. “No!” I said, surprising myself by my tone. “That’s wrong. *Blame* her.”

I startled Rohrbeck, too. He looked at me as though I had suddenly sprouted horns, but he didn’t get a chance to speak. June Terple came flying by the room and saw us. She stuck her nose in, grabbing a hold-on to yell at Mark in passing. “Rohrbeck! Get your ass in gear! I want you to make sure Hans is shifting focus as fast as possible. We could be losing all kinds of data!” And then she was gone again, to wherever she was gone to.

Mark gave me a peculiar look, but then he shrugged and waved his hands to show that when the boss gave orders, even orders to do what he had already done, he couldn’t just stay and talk anymore, and then he was gone as well.



I didn't blame him for the peculiar look. I hadn't realized I was so sensitive in the matter of two-timing partners. But apparently I was.

\* \* \* \*

Even though I was the boss, I had no business keeping the PhoenixCorp people from doing their jobs. Anyway, there was more bustle and confusion going on there than I liked. I went back to my ship to stay out of everybody's way, watching the pictures as they arrived with only Hypatia for company.

She started the projections up as soon as I arrived, without being asked, and I sat down to observe.

If you didn't think of the Crabbers as *people*, what they were doing was certainly interesting. The Crabbers themselves were, for that matter. I could see traces of those primitive predators in the civilized—civilized!—versions before me. Now, of course, they had machines and wore, clothes and, if you didn't mind the extra limbs, looked rather impressive in their gaudy tunics and spiked leggings, and the shawl things they wore on their heads that were ornamented with, I guessed, maybe insignia of rank. Or junk jewelry, maybe, but most of them were definitely in one or another kind of uniform. Most of the civilized ones, anyway. In the interior of the south continent, where it looked like rain forest and savanna, were lots of what looked like noncivilized ones. Those particular Crabbers didn't have machines, or much in the way of clothing either. They lived off the land, and they seemed to spend a lot of time gaping up worriedly at the sky, where fleets of blimps and double-winged aircraft buzzed by now and then.

The civilized ones seemed to be losing some of their civilization. When Hans showed us close-ups of one of the bombed-out cities, I could see streams of people—mostly civilians, I guessed—making their way out of the ruins, carrying bundles, leading kids or holding them. A lot of them were limping, just dragging themselves along. Some were being pulled in wagons or sledlike things.

"They look like they're all sick," I said, and Hypatia nodded.

"Undoubtedly some of them are, dear," she informed me. "It's a war, after all. You shouldn't be thinking just in terms of bombs and guns, you know. Did you never hear of biological warfare?"

I stared at her. “You mean they’re spreading *disease*? As a *weapon*?”

“I believe that is likely, and not at all without precedent,” she informed me, preparing to lecture. She started by reminding me of the way the first American colonists in New England gave smallpox-laden blankets to the Indians to get them out of the way—“The colonists were Christians, of course, and very religious” — and went on from there. I wasn’t listening. I was watching the pictures from the Crabber planet.

They didn’t get better. For one moment, in one brief scene, I saw something that touched me. It was an archipelago in the Crabber planet’s tropical zone. One bit looked a little like my island, reef and lagoon and sprawling vegetation over everything. Aboriginal Crabbers were there, too. But they weren’t alone. There was also a company of the ones in uniform, herding the locals into a village square, for what purpose I could not guess—to draft them? to shoot them dead?—but certainly not a good one. And, when I looked more closely, I saw all the plants were dying. More bioweapons, this time directed at crops? Defoliants? I didn’t know, but it looked as though someone had done something to that vegetation.

I had had enough. Without intending it, I came to a decision.

I interrupted my shipmind in the middle of her telling me about America’s old Camp Detrick. “Hypatia? How much spare capacity do you have?”

It didn’t faze her. She abandoned the history of human plague-spreading and responded promptly. “Quite a lot, Klara.”

“Enough to store all the data from the installation? And maybe take Hans aboard, too?”

She looked surprised. I think she actually was. “That’s a lot of data, Klara, but, yes, I can handle it. If necessary. What’ve you got in mind?”

“Oh,” I said, “I was just thinking. Let me see those refugees again.”

\* \* \* \*

## CHAPTER X

I kept one eye on the time, but I had plenty for what I wanted to do. I even

gave myself a little diversion first. I went to my island.

I don't mean in person, of course. I simply checked out everything on Raiwea through my monitors and listened to the reports from the department heads. That was almost as satisfying. Just looking at the kids, growing up healthy and happy and free the way they are — it always makes me feel good. Or, in this case, at least a little better.

Then I left my remote-accessed Raiwea and went into the reality of the Phoenix ship.

Hans was busily shifting focus every time a few new frames came in, so now the pictures were coming in faster than anybody could take them in. That couldn't be helped. There was a whole world to look at, and anyway it didn't matter if we saw it all in real time. All the data were being stored for later analysis and inter-pretation—by somebody else, though. Not by me. I had seen all I wanted.

So, evidently, had most of the Phoenix crew. Starminder and Julia Ibarruru were in the eating chamber, but they were talking to each other about the Core and paying no attention to the confusing images pouring in. Bill Tartch had his cameras turned on the display, but he was watching the pictures only with sulky half-attention, while Denys hung, sound asleep, beside him. "What's the use of this, Klara?" he demanded as soon as he saw me. "I can't get any decent footage from this crap, and most of the crew's gone off to sleep."

I was looking at Denys. The little tart even snored prettily. "They needed it," I told him. "How about Terple?"

He shrugged. "Kekuskian was here a minute ago, looking for her. I don't know whether he found her or not. Listen, how about a little more of your interview, so I won't be wasting my time entirely?"

"Maybe later," I said, not meaning it, and went in pursuit of June Terple.

I heard her voice raised in anger long before I saw her. Kekuskian had found her, all right, and the two of them were having a real cat-and-dog fight. She was yelling at him. "I don't give a snake's fart what you think you have to have, Oleg! We're going! We have to get the whole installation the hell out of here while we're still in one piece."

"You can't do that!" he screeched back at her. "What's the point of my

coming out here at all if I can't observe the supernova?"

"The point," she said fiercely, "is to stay alive, and that's what we're going to do. I'm in charge here, Kekuskian! I give the orders, and I'm giving them now. Hans! Lay in a course for the neutron star!"

That's when I got into the spat. "Cancel that, Hans," I ordered. "From here on in, you'll be taking your orders from me. Is that understood?"

"It is understood, Ms. Moynlin," his voice said, as calm and unsurprised as ever. Terple wasn't calm at all. I made allowances for the woman; she hadn't had much sleep, and she was under a lot of strain. But for a minute there I thought she was going to hit me.

"Now what the hell do you think you're doing, Moynlin?" she demanded dangerously.

"I'm taking command," I explained. "We're going to stay for a while. I want to see that star blow up, too."

"Yes!" Kekuskian shouted.

Terple didn't even look at him. She was giving her whole attention to me, and she wasn't in a friendly mood. "Are you crazy? Do you want to get killed?"

It crossed my mind to wonder if that would be so bad, but what I said, quite reasonably, was, "I don't mean we have to stay right here and let the star fry us. Not the people, anyway. We'll evacuate the crew and watch the blowup on the remote. There's plenty of room for everybody in the two ships. I can take three or four with me, and Bill can take the others in his rental."

She was outraged and incredulous. "Klara! The radiation will be *enormous!* It could destroy the whole installation!"

"Fine," I said. "I understand that. So I'll buy you a new one."

She stared at me in shock. "Buy a new one! Klara, do you have any idea of what it would cost—"

Then she stopped herself short and gave me a long look. "Well," she said, not a bit mollified, but more or less resigned to accepting the facts of life, "I guess you do know, at that. If that's what you want to do, well, you're

the boss.”

And, as usual, I was.

\* \* \* \*

So when I gave orders, no one objected. I got everybody back in the dining chamber and explained that we were abandoning ship. I told Terple she could come on my ship, along with Starminder and Ibarruru. “It’s only a few days to Earth; the three of you can all fit in my guest bedroom. Mason-Manley and Kekuskian can go with Bill and Denys. It’ll be a little crowded in his rental, but they’ll manage.”

“What about Hans and me?” Rohrbeck asked, sounding puzzled.

I said offhandedly, “Oh, you can come with me. We’ll find a place for you.”

He didn’t look as thrilled as he might have at the idea of sailing off through space with a beautiful, unattached woman, such as me. He didn’t even look in-terested. “I don’t just mean me *personally*, Klara,” he said testily. “I mean me and my shipmind. I put a lot of work into designing Hans! I don’t want him ruined!”

I wasn’t thrilled by his reaction, either, but I do like a man who likes his work. “Don’t worry,” I assured him. “I asked Hypatia about that. She says she has plenty of extra capacity. We’ll just copy him and take him along.”

\* \* \* \*

## CHAPTER XI

I had never seen a supernova in real time before —well, how many people have? — but that, at least, was not a disappointment. The show was everything it promised to be. We were hovering in our two ships, a few million kilometers off the prime focus. Hans was taking his orders from Kekuskian now, and He had ditched the Crabber planet for good to concentrate on the star.

Hypatia whispered in my ear that, on his rental, Bill Tartch was pissing and moaning about the decision. He had wanted to catch every horrible, tragic bit, if possible right down to the expressions on the faces of the Crabbers when they saw their sun go all woogly right over their heads. I

didn't. I had seen enough of the Crabbers to last me.

In my main room we had a double display. Hypatia had rigged my ship's ex-ternal optics so we could see the great mirror and the tiny Phoenix ship, together like toys in one corner of the room, but the big thing was the Crabber star itself as seen from the PhoenixCorp ship. It wasn't dangerous — Hypatia said. Hans had dimmed it down, and anyway we were seeing only visible light, none of the wide-spectrum stuff that would be pouring out of it in a minute. Even so, it was huge, two meters across and so bright we had to squint to watch it.

I don't know much about stellar surfaces, but this particular star looked sick to me. Prominences stuck out all over its perimeter, and ugly sunspots spotted its face. And then, abruptly, it began to happen. The star seemed to shrink, as though Hans had zoomed back away from it. But that wasn't what was going on. The star really was collapsing on itself, and it was doing it fast. "That's the implosion," Hypatia whispered to me. While we watched, it went from two meters to a meter and a half, to a meter, to smaller still —

And then it began to expand again, almost as fast as it had shrunk, and became far more bright. Hypatia whispered, "And that's the rebound. I've told Hans to cut back on the intensity. It's going to get worse."

It did.

It blossomed bigger and brighter—and angrier—until it filled the room and, just as I was feeling as though I were being swallowed up by that stellar hell, the picture began to break up. I heard Terple moan, "Look at the mirror!" And then I understood what was happening to our image. The little toy PhoenixCorp ship and mirror were being hammered by the outpouring of raw radiation from the supernova. No filters. No cutouts. The PhoenixCorp vessels were blazing bright themselves, reflecting the flood of blinding light that was pouring on them from the gravitational lensing. As I watched, the mirror began to warp. The flimsy sheets of mirror metal peeled off, exploding into bright plumes of plasma, like blossoming fireworks on the Fourth of July. For a moment we saw the wire mesh underneath the optical plates. Then it was gone, too, and all that was left was the skeleton of reinforcing struts, hot and glowing.

I thought we'd seen everything we were going to see of the star. I was wrong. A moment later the image of the supernova reappeared before us. It wasn't any-where near as colossally huge or frighteningly bright as it had been before, but it was still something scary to look at. "What—?" I began

to ask, but Hypatia had anticipated me.

“We’re looking at the star from the little camera in the center of the dish now, Klara,” she explained. “We’re not getting shipside magnification from the mirror anymore. That’s gone. I’m a little worried about the camera, too. The gravitational lensing alone is pretty powerful, and the camera might not last much” —she paused as the image disappeared for good, simply winked out and was gone — “longer,” she finished, and, of course, it hadn’t.

\* \* \* \*

I took a deep breath and looked around my sitting room. Terple had tears in her eyes. Ibarruru and Starminder sat together, silent and stunned, and Mark Rohrbeck was whispering to his shipmind. “That’s it,” I said briskly. “The show’s over.”

Rohrbeck spoke up first, sounding almost cheerful. “Hans has all the data,” he reported. “He’s all right.”

Terple had her hand up. “Klara? About the ship? It took a lot of heat, but the dish burned pretty fast and the hull’s probably intact, so if we can get a repair crew out there — “

“Right away,” I promised. “Well, almost right away. First we go home.”

I was looking at Rohrbeck. He had looked almost cheerful for a moment, but the cheer was rapidly fading. When he saw my eyes on him, he gave me a little shrug. “Where’s that?” he asked glumly.

I wanted to pat his shoulder, but it was a little early for that. I just said sym-pathetically, ‘You’re missing your kids, aren’t you? Well, I’ve got a place with plenty of them. And, as the only grown-up male on my island, you’ll be the only dad they’ve got.’”

\* \* \* \*

## CHAPTER XII

That blast from the supernova didn’t destroy the PhoenixCorp ship after all. The mirror was a total write-off, of course, but the ship itself was only cooked a little. June Terple stooled around for a bit while it cooled down, then went back with what was left of her crew. Which wasn’t much.

Mason-Manley talked his way back into her good graces once Denys wasn't around anymore; Kekuskian promised to come out for the actual blowup, eighty years from now, provided he was still alive; and, of course, she still had the in-destructible Hans, now back in his own custom-designed datastore. The rest of her people were replacements. Starminder went back to her family in the Core, and I paid Ibarruru's fare to go along with her as a kind of honorary citizen ambassador.

Naturally, Terple invited me to join them for their stint at the neutron star — couldn't really avoid it, since the new money was coming from the same place as the old, namely mostly me. I said maybe, to be polite, but I really meant no. One look at the death of a world was enough for me. Bill Tarte's special show on the Crabbers went on the net within days. He had great success with it, easily great enough so that he didn't really mind the fact that he no longer had me.

Hypatia kept copies of all the files for me, and those last little bits of data stayed with me on my island for a long time. I played pieces of them now and then, for any of the kids that showed an interest, and for their moms, too, when they did. But mostly I played them for me.

Mark Rohrbeck stayed with me on Raiwea for a while, too, though not too long. That's the way my island works. When my kids are ready for the world outside, I let them go. It was the same with Rohrbeck. For him it took just a little over three months. Then he was ready, and he kissed me good-bye, and I let him go.

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