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*The Prophet*  
*Stanley Schmidt*  
*Analogue*  
*April, 1972*

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By one of those coincidences that happen oftener in real life than in fiction – because literary people consider them unrealistic – Kubram Eybruk came back on the same day Raf Tambori's prophecy was fulfilled. Tambori was enjoying a sort of family reunion that evening, with four generations of his clan gathered around the console-harp in the living room. Razel still played impeccably, and they all sang old songs and new with a *joie de vivre* that almost made Raf forget his fear – and then made him remember. Their voices masked the doorbell the first time it rang, but then they heard it and the chorus gave way to casual chatter and curiosity as Raf went to open the door.

At first he didn't recognize the tall man standing there in the pale night. The passage of a century had wrought changes, but in a few seconds he imagined the silver fringe around the bald head restored to its old color, and the wrinkles smoothed, and then he knew. He frowned. "Kubram?"

Eybruk smiled oddly. "Good to see you again, Raf. May I come in?"

Raf nodded uncertainly and stepped aside, then closed the door after him, shutting out the night's chill. He hadn't really expected to ever see Eybruk again, and he wasn't sure how to react to the surprise visit. There must be some reason for it, and he wondered what it was.

"How are the omens?" Eybruk asked.

Tambori's face hardened abruptly. "Not good," he said, "but if you want to talk about that, we'd better go to my study." He led the way across the room and into the corridor to the back of the house. Out of the corner of his eye he saw Razel frown and rise from the console-harp.

He let Eybruk precede him into the study and quietly drew the door shut after them. Eybruk glanced appreciatively around at the carved sapphirewood paneling and the books and papers that were everywhere, and then at the view through the big picture window. He stared for a long time at the surrounding hills, lightly dusted with the winter's last powdery snow and bathed in the ghostly light of the Nightsun. Then he turned back to his host and sank into a deeply upholstered chair. He looked up at Tambori expectantly, saying nothing.

And Tambori tried to decide where to begin – and to decide that, he had to remember where they had left off. Had it really been a century? At least that...

It's been said far too often, though with some truth, that physicists who are going to do great things do them before they are thirty. Raf Tambori did his greatest work at twenty-nine, but it never received wide acclaim. Had he not already done his second greatest – the work with bulk antimatter which brought him not only wide but practically instant fame – quite possibly nobody would have listened at all. Certainly he would not have got as far as an audience with Davon Reyd, Minister of Science.

Reyd, a slightly built, tight-lipped man of fifty or so, with a few strands of greasy black hair straying from beneath his official skullcap, had a dossier in front of him. He riffled through the few papers in the folder, peering through thick rimless semicircular glasses and frowning slightly. Then he looked up at Tambori – not lifting his head, but simply re-aiming his eyes to look over his lenses rather than through them. "I've read this," he said, "but it's rather sketchy and rather far afield for me. Maybe before we do anything else, you should run over it with me – to make sure I understand. You've developed something you call a neutrinoscope?"

Tambori nodded. He wouldn't deny the charge of sketchiness – he had literally depended on that, together with his reputation and the implication that what he was withholding was important, to get past underlings to the man at the top. "It's a short term," he explained, "for a high-efficiency, directional neutrino detector. Neutrinos, as you know, are produced in several nuclear and subnuclear processes, but they've always been nearly impossible to study because they so seldom interact with matter. Almost all of them pass right through any reasonable thickness of anything – including conventional detecting instruments. What makes my neutrinoscope possible is an artificial field interaction I've learned to –"

Reyd held up a hand. "Excuse me, Master Tambori. That much I follow, and I sense you're about to plunge into details that would be beyond me. I gather the essential point of all this is that there are lots of neutrinos around, but your gadget is the first that can see them in significant numbers. Right so far?"

"Right."

"And because it can see large numbers of them, it can afford to be selective. It can look at neutrinos from a small range of directions only, instead of taking everything it can grab."

Tambori nodded. "Right again."

Reyd leaned back, stretching under his light robes of state and looking straight at Tambori. "Fine," he smiled. "Now what is there about that to make you so anxious to see me and so reluctant to talk to my subordinates?"

The look in Reyd's piercing black eyes made Tambori feel that he was being baited. Reyd already knew what came next...but if he wanted to hear Tambori say it, Tambori would. "I've been watching the Nightsun with the neutrinoscope. We've known all along that the Nightsun is a very bright red giant, and that it's only a couple of light-years away. Now I've found that its neutrino emission is quite a bit higher than it should be for a normal star of the Nightsun's type – and increasing so fast the trend is unmistakable even in the short time I've had the neutrinoscope."

"Meaning?"

"The Nightsun is on the verge of going supernova."

Reyd's tight lips drew tighter. "Why do you say that?"

"Astrophysicists have always agreed that a supernova is one way a star like the Nightsun can end. Not a common way, but a possible way. Because it's not common, they've never agreed on just how it happens. But *all* their theories demand conditions in the stellar core that lead to large-scale neutrino emission. And, for the same reason they're so hard to detect, neutrinos are the one thing that can be produced in the core of a giant star and escape virtually unchanged. Given a neutrinoscope, they're the one way we have of looking directly at core conditions. And my neutrinoscope says the Nightsun's core is in danger."

Reyd stared uneasily out the window at the parklike capital city. "Does that mean *we* are in danger?"

"Yes," said Tambori. "And many generations to come."

"The Nightsun *is* two light-years away, Master Tambori. A light-year is a goodly distance."

"Granted. Far enough so that even if the Nightsun flares to a billion times the output of our sun – which is quite likely – it will still look fainter to us than our own sun. But not a lot. It will be far too bright to look at directly. It will produce noticeable warming and troubled weather. It will give us *more* ultraviolet and harder radiation than our own sun – though the atmosphere will keep most of it off us."

"Hm-m-m. How long will that go on?"

"A matter of months," Tambori told him, "and fading all the while. But before you shrug and say we can weather it, let me point out that the worst comes later and lasts longer. Supernovae – and the expanding nebulae they produce – are the main source of cosmic rays. We'll get an appalling blast of them, beginning not long after the explosion and continuing for years afterward – lots of years. The ejected nebula will reach us in a few hundred years, and Embrel will be inside it for several more centuries. And all the while being pounded by high-energy particles – enough to produce genetic and ecological disaster even if Embrel's magnetic field stays intact. And that's likely to be messed up, too."

Reyd kept looking out the window. A sea dactyl swooped close and he followed it out of sight with his eyes before speaking again. "Very interesting," he said sourly. "Did you just come to tell me horror stories, or do you suggest doing something about all this?"

"That," said Tambori, "is imperative – if we care about survival. I see two main possibilities. We can learn to flee, or we can learn to weather the storm. I favor an all-out effort in *both* directions. Because even if we can develop space travel in time, the number

who can flee will be limited. And the period of hiding for those who stay home will be long – possibly *too* long. They're both long shots – but they're both better than sitting here meekly becoming extinct."

Reyd sat silently for half a minute. Then he took a helical-stemmed pipe from his desk and carefully filled and lit it. He took a couple of slow puffs and then suddenly leaned forward with his elbows on the desktop, staring intently at Tambori. "What's the resolution of this neutrinoscope of yours?" he demanded abruptly.

"You mean how small a piece of sky does it see? About a square degree."

"Hm-m-m. Not very good. How are you so sure the neutrinos you see are from the Nightsun's core?" He waved a hand. "Don't answer – a rhetorical question. I'll grant it's a reasonable assumption. OK – when's it supposed to happen?"

"I can't say exactly – we have too little direct experience with supernovae, and none with neutrino measurements on them. It could come within a year, or not for two or three centuries. But I doubt longer than that."

"Doubt," Reyd mimicked. "Maybe. And nobody's ever watched a budding supernova closely, even with conventional methods." He looked troubled, at least as much by the decisions he must make as by Tambori's prediction. "Space travel," he said suddenly. "You think it can be done, eh? When nobody's ever even been out of the atmosphere?"

"I think so. We have both fission and fusion engines, and several people have done calculations on the feasibility of using them to reach escape speed and even relativistic speeds. Formidable engineering problems, sure...but not insoluble."

"Not all authorities share that belief." Reyd puffed silently on his pipe for a while, then stood up and walked to the window. He stood with his back to Tambori, looking out, and said slowly, "I'm sorry, Master Tambori, but I just can't see it. What you have here is a prediction of disaster based on data obtained with a new instrument never used by anybody but you and interpreted in terms of theories that have never been fully tested. You're not sure it's going to happen at all. If it does, you can't say when. You haven't published any of this yet, have you?"

"No."

"Don't. It's dynamite. Look, I can't ask the nation to start these programs you want. They're both huge problems. Too huge. Too much sacrifice to demand for such flimsy speculation."

"Flimsy speculation?" Tambori asked, beginning to anger. "Of course they're not *certainties* – but virtually all astrophysicists would agree I'm talking very high probabilities. And all civilization...all *people*...on Embrel are at stake. Your Excellency, can you risk the death of your world and your species by guessing wrong?"

"I may have to," Reyd said quietly. He turned to face Tambori. "We disagree on the

odds. Even if you're right, it may be too late for us to do anything about it—in which case public terror would be pointless. Or the danger may be so far in the future that it's not necessary for us to worry about it yet."

"*That,*" said Tambori, "is a dangerous thought. As you say, developing either space travel or adequate defense against the radiation will be a huge problem. So huge that even if the supernova is still two centuries off, the problem is urgent...right now!"

Reyd glared at him. "Don't try to panic *me*, Tambori. I've thought this out rather carefully. My decision is that we should keep quiet about it for a while, and see how things develop. That's my *final* decision."

"In that case," Tambori said calmly, rising, "I have no choice but to go directly to the Prime Minister."

Reyd's eyebrows shot up momentarily. Then he said, "He won't see you."

"Won't he? I think I have enough respect in this field so that if I tell the Prime Minister I have news so important it has to reach him, even if it means going over his Minister of Science's head, the Prime Minister just may be very interested in hearing it. *Especially* if you warn him that I'm likely to try it and try to keep him from listening."

Reyd looked at him with new respect—and a touch of fear. What Tambori said was true—and Reyd had not given him credit for such political acumen. And if the Prime Minister *did* listen, and happened to decide that Tambori was right and Reyd was wrong...

It would not be good for Reyd's political future.

The Minister of Science smiled thinly and without humor. "OK, Tambori...one point for you. I'll reconsider to this extent: I'll see that your findings get before a special advisory panel of experts for evaluation, right away—*provided* you promise to keep quiet in the meantime. You understand, of course, that it will take some time—a few days, perhaps weeks."

"Of course," Tambori nodded. "Thank you, Your Excellency. I'll send the technical details over this afternoon." Feeling more frustration than elation at his very minor victory, he started for the door.

Reyd spoke behind him. "Master Tambori?" Tambori stopped and turned. Reyd looked at him for several seconds, then said coolly, "You think I underestimate the urgency of your request. Just be sure *you* don't underestimate how explosive a premature public announcement of something like this could be."

When he said no more, Tambori left.

He felt slightly better when he stepped out onto the broad front stairway of the Ministry Building and drew a deep breath. He liked Zenzdat—its clean air, never quite still and flavored by the sea and the fragrant semitropical vegetation still abundant in the city,

always seemed a welcome antidote to the frustrations of dealing with its most prominent citizens. Right now Tambori needed the antidote, and today was an especially fine day even for Zenzdat. The sky was clear and deep-colored all the way down to the horizon, and the city glittered in crisp sunlight. The Nightsun was above the horizon by day at this latitude and season, but in direct contrast to Embrel's own sun it looked small and innocuous.

At the moment, only Tambori believed it wasn't.

He paused at the top of the stairs to take in the view and recompose himself, then started down. Halfway down he heard someone call his name and turned to see who it was.

"Kubram Eybruk!" he laughed, surprised. "What brings you here?"

The tall man with the boyish face and the neat black fringe around his smooth-shaven head strode over, grinning broadly. He clapped Tambori on the shoulder and boomed, "Well, if it isn't Raf! I might well ask you the same question, but you got there first. I'm here to see about a research grant. Isn't everybody?"

Tambori smiled warmly. "Just about." He and Kubram had been Post-initiates together at the Central Institute here in Zenzdat, but then they had gone their very separate ways. A chance meeting a thousand miles or more from either of their current homes seemed surprising, but of course it *wasn't* exactly a chance meeting. Lots of scientists came here in quest of grants. Tambori had private reservations about calling history a "science," but its respectability had grown considerably lately – and Kubram had undeniably helped. He had made his mark in history as early and as soundly as Tambori had made his in physics.

"You're after a grant, too?" Kubram asked. "Let's see – you're coming out. That would mean you've already met your maker. How'd it go?"

"Er...that's *sort* of it," Tambori said. "Actually it's a good deal more complicated –"

"Oh." Eybruk glanced at his watch, a flamboyant affair set into the cuff of his fashionable tunic. "I'd like to hear about it, but my appointment's in four minutes. We must get together sometime while we're in town. Tonight?"

"Sounds good." Tambori brightened. "Why don't you come over to our apartment? I know Razel would like to see you, too, and...Is your wife with you?"

Eybruk shook his head. "No. Strictly a business trip, and hopefully a brief one." He frowned curiously. "You have an apartment in Zenzdat? I thought you were at a university somewhere in the northeast."

"I am. Delfan. But I *don't* expect my business here to be brief, unfortunately. So we thought a temporary apartment would be cheaper than a hotel." Tambori scribbled on a slip of paper and handed it to Eybruk. "Here's the address. Dinner at seven?"

"Fine. See you then." He started hurriedly up the stairs and Tambori continued down at a more leisurely pace.

"Good luck with your grant," he called over his shoulder. Eybruk waved acknowledgment and disappeared through the door.

"Nothing very definite this visit," Eybruk said jovially as he finished his second huge piece of steak and reached out to spear another. "This steak is *terrific!*" he told Razel again. "Hope you don't mind if I have just one more." Razel, a diminutive brunette with nearly infinite patience, just smiled genially.

"So," Raf said to Kubram, "you'll be in town longer than you expected?"

"I'm afraid so. I just had a vague feeling of being put off today. Hardly uncommon in grant interviews, of course. I couldn't tell if it was significant or not."

"I know what you mean," Raf nodded. He didn't offer to put Kubram up for the rest of his stay; the apartment was simply too small. He changed the subject slightly. "You haven't told us what you're trying to get support for, Kubram. May we ask?"

Kubram finished off his steak and leaned back in his chair, stretching contentedly. "Sure...if you can stand listening to a historian's prattle. Essentially, I'm trying to push historical knowledge farther back than it extends at present. Real history, you know, only dates back six hundred years or so. Roughly speaking, real record-keeping seems to start with the War of Secession, when Noffaz broke off from Embrelmak..."

Razel got up and unobtrusively asked if anybody wanted dessert, then went about preparing and serving it, all the while listening attentively. "Since then," Kubram continued, "everything is pretty well documented. But the *origins* of everything that makes up our civilization lie farther back – and I think that's where the really important questions in history lie now. What started me off was a hunch – I gradually got to feeling that some things everybody takes for granted are really strange. A purely subjective judgment, of course, and treacherous. How can you really tell if something is strange when it's the only example of its kind you've ever seen?"

"Interesting point," Raf grunted as he started his dessert. Actually, Kubram's ramblings were taking him into territory where he personally found it hard to avoid boredom.

Razel really *was* interested. "Can you give an example?" she asked.

"You couldn't stop me if you tried," Kubram grinned. "Let me put it as a question. How many human cultures do we really have on Embrel?"

Raf frowned suspiciously. When Kubram asked a question like that, it was sure to be loaded. Razel wrinkled her nose thoughtfully and ventured, "Two?"

"You're generous," Kubram told her. "Basically, there's only one. Oh, it's true that isolation and their libertarian movement have caused some differences between the Noffazim and us, but the similarities far outnumber the differences. Not only in the way they do things, but in their speech. There is essentially only one cultural and linguistic stock on the whole planet. It has two branches which have diverged slightly – but only

because of an obvious splitting at an identifiable point in history. Six hundred years ago."

Razel frowned. "What's strange about that? Embrelmak occupies the northern continent; Noffaz was its colony on the southern. I should think it would be surprising to find anything *but* that kind of similarity between them." Raf agreed with her; he found himself wondering if Kubram was deliberately trying to be obscure.

"Agreed," Kubram said. "Embrelmak and Noffaz should be similar. But is it to be expected that there are *no other* cultures – and no record of any ever having been encountered? Look at it from another angle. Embrelmak and Noffaz have been complex and sophisticated civilizations for the entire recorded period. Does civilization begin with the beginning of time – or can we imagine a time when it didn't exist, and then somehow it emerged gradually?"

Raf felt his interest beginning to stir. The questions Kubram was asking *were* disturbing – but hard to grasp. And surely not as momentous as his supernova problem...

Razel said, "It's generally conceded that life itself arose from an earlier state of things – man's a form of life. I guess there *must* have been a pre-civilization state – though it just tickles my brain to try to imagine what it might have been like. But if man arose at one place and spread from there, why shouldn't that lead to a single line of cultural development?"

Kubram nodded approvingly. "Maybe it should. There's some support for that theory – a few very scattered and fragmentary records that give a vague impression of man having spread from the general vicinity of Deymbak. But there are a couple of odd things about that. For one, nobody lives around there now, and hardly anybody even goes there very often – too much seismic activity for comfort. For another, would the pre-civilization state of man be as neat as that? Mightn't there be small groups of people, separated, following different paths, competing?" He shrugged. "I don't know. Like I say, we have no basis for comparison. We've really only seen one culture – and *no* primitive ones."

"And you really think you have a chance of finding out about the prehistory phase?"

Kubram shrugged again, and grinned. "I hope so. I want to make a more thorough attempt to gather and correlate what old records there are. And I want to try something new. You've heard about the biologists trying to put together a detailed picture of evolution by digging up fossils? Well, I think maybe a historian can learn something by digging, too – like at Deymbak. It's all very untraditional, both the questions and the methods, but I think it's important. So while I expect the Ministry to balk, I don't plan to give up easily."

They adjourned to the living room, Kubram taking one of the deep armchairs and Raf one end of the small couch. Razel started some music and some mild incense and sat down next to Raf.



"You were going to tell me what *you're* working on," Kubram reminded.

"Oh...yes." Raf didn't really feel like talking about it now. He would rather try, for this one evening, to match Kubram's obviously ebullient mood, and talking about the death of Embrel seemed a poor way to do it. But it would be rude to refuse. "I'll have to ask you not to repeat any of this to anybody. Davon Reyd is skeptical and afraid of panic, and he only agreed to look into it on condition that I keep quiet during the investigation. But I can trust you, can't I, Kubram?"

"Of course." Kubram looked at him peculiarly. "Must really be something, to have old Reyd running scared."

"It's something, all right. I've developed an instrument that detects neutrinos. It lets me see things about stars that we've never been able to measure before. It tells me the Nightsun is going to explode, probably within a couple of centuries."

"You're kidding."

"Would I kid about something like that?" Raf snapped. Then he caught his temper and went on earnestly, "Believe me, I'm not. And the Nightsun is so close that if it happened right now it would wipe us out. Everybody – all over Embrel. But there may be time to learn to survive. If we work at it, maybe we can learn enough so some people can hole up in special shelters and keep the race alive until it's safe to live out in the open again. And a fortunate few might escape to planets of other stars in safer locations and not have to go into hiding at all."

"Hm-m-m." Kubram took out a cigar, lit it, and blew several experimental puffs and then a smoke ring. Then he chuckled. "Are you sure the race is *worth* saving? With all its faults and foibles?"

Raf stared at him, confused. Was he actually suggesting that it wasn't – or wasn't he taking any of this seriously at all? "Yes," Raf said quietly, taking the question at face value. "Sure, people have faults, but let's not throw the baby out with the bath water. Faults aren't *all* we have – and we can learn, though the process is often painfully slow. Look, I'm a teacher, among other things. So are you. I've seen all kinds of potential in my students, even in the ones where I'd least expect it at first glance. Haven't you?"

Kubram shrugged. "Yeah, I guess so." He blew another smoke ring. "Just a philosophical question; didn't mean to offend. Let me try another one. You said some could escape to planets of other stars. Are you sure other stars *have* planets to escape to? Everybody takes it for granted that planets are normal, but has anybody actually verified it? How do we *know*?"

The question stabbed deep in Tambori's mind. Nobody had ever asked him that pointblank before, and he felt something chillingly close to horror at the sudden realization that he couldn't answer it.

How *did* he know?

The atmosphere grew more and more strained after that, and before long even Kubram sensed that something was wrong and made his excuses. He never did cast off

his characteristic bluster, though, and as he left he clapped Raf on the shoulder and boomed jovially, "History, Raf, history! *That's* where it's at!"

As soon as the door shut after him, Raf admitted to himself that he was suddenly very tired. He rested his head on Razel's shoulder. "Reyd said it would take at least a few days before they decided anything," he murmured. "Let's go up to Trimbeay for a while."

Trimbeay was far to the north and far from centers of culture, a land of ancient mountains worn low and rounded and covered by temperate forest all the way to the ridgecrests. What drew Raf and Razel there was the magnificent network of caves beneath the hills. Not only were they scenically awesome, but everything about caving – the deep darkness everywhere except where carbide lamps intruded, the smell of the lamps burning, crawling half a mile through a tiny mud-choked tunnel to a room filled with multicolored crystal formations extending out of reach of the lamps – was such a complete change from ordinary experience as to have therapeutic value. Again and again, when confronted with an impasse in some problem, Raf had struggled for a while and then dropped everything to come here. And after a day or two of strenuous subterranean activity, he always found his mind had cleared and what had looked insurmountable had become almost trivial.

This time it didn't work.

Even in the crawlways and pits, things kept gnawing at his consciousness. Reyd, Kubram, and his changed attitudes – had he and Raf really grown that far apart? And that question he had asked which Raf had found he couldn't answer. That gave him no rest. The idea that stars normally had planets belonged to that body of knowledge so old it was "Tradition." But Raf couldn't remember ever seeing a direct reference to an experimental reason for believing it. Having always prided himself on a carefully cultivated habit of stubbornly questioning everything, he was shocked to find that he had let an unsubstantiated legend become so deeply ingrained in his thoughts. He would have to look into it when he got back. Hunt for its origins – find out if there *was* any reason to believe it was so. And if so, how *did* it get into the body of common knowledge so long ago? And *how* long ago?

*Gad*, he thought, *I'm starting to sound like Kubram!*

There were other things gnawing at him, too. Like the problem he faced with Reyd. *How do you get people to feel a sense of urgency about a problem which doesn't need to be solved for a long time – but which will take a long time to solve?*

And still others...and he couldn't even see what some of them were, which made it worse. Somehow, he even seemed to see the caves themselves in a different light – and he couldn't put his finger on why.

"I guess we'll have to write this one off as a failure," he told Razel at its end. They were sitting on rocks under an overhang fifty yards from their nuclear-electric copter, having lunch while waiting out a cloudburst. The rain pattered on the dark-green

vegetation outside, and a steady runoff from the overhang curtailed off their sheltered area. It seemed to be slowing down. They would probably be able to start back to Zenzdat as soon as they finished lunch.

Razel said nothing, but looked sympathetic. Raf held a sandwich in one hand, eating it slowly, and let the fingers of the other drum idly on the rock that was serving him as a seat. Becoming aware of the relief patterns in its surface, he glanced down at it.

Fossils. The little things embedded in rocks which the biologists said were relics of extinct plants and animals, and on which they hoped to build a family tree for all life on Embrel. The rocks around here were full of them, and Raf was no biologist. Yet he found himself staring at them for a long time, dimly sensing that something about *them* bothered him, too.

Why should that be? Was he going to start seeing demons behind every bush?

He shook his head as if to clear it and finished his sandwich. Then he stood up and stuck a hand out through the water curtain. Beyond, the rain had stopped and the sun was about to break through the clouds.

He looked at Razel and saw that she had finished eating, too. "Ready?" he asked. She nodded. "Let's go back and face the music."

Together they walked out to the copter.

When they got back, Davon Reyd wanted to see him. There was a note waiting at the Tamboris' apartment, and when Raf answered it by phone, Reyd said the panel was ready to meet with him. *Already?* Raf thought. But he made no comment.

He took along a case full of documents he might need. The meeting was in a low-ceilinged conference room in the Ministry Building, near Reyd's office, dominated by a large oval table at which the others were already seated. It was an impressive – and, in some ways, surprising – assemblage. Davon Reyd was at one end – and at the other, facing him, was the Prime Minister himself. Between them, along one side of the table, sat the panel of experts Reyd had assembled – and Tambori recognized at once that at least some of them actually were top men in their fields.

Next to Davon Reyd sat Kubram Eybruk. His presence immediately struck Tambori as not only surprising but vaguely ominous – and the self-conscious way he seemed to be avoiding Tambori's eyes didn't help.

Reyd welcomed him with formal courtesy and directed him to the single chair on the side of the table facing the panel. "The panel have all read your report," he explained, "and would like to ask you a few questions, if you don't mind. Do you know all these gentlemen?" He introduced them – the astronomer Eryk, the old and revered physicist Kufman, power technologist Bardof, and the others whose names were new to Tambori and did not stick.

"This neutrinoscope of yours is a fascinating thing," Kufman drawled when the

introductions were over, "if it does all you claim. But it does depend on an artificial field effect, and I, for one, would like to see more verification that it's really what you think it is. For example" — he flipped through his copy of Tambori's notes — "on page 26 you skip some steps between Equations 12 and 13. Could you fill me in, please?"

Tambori tried. Kufman grunted noncommittally and offered Eryk the next question.

The astronomer smiled as if to put Tambori at ease. "I must admit *I'm* pretty convinced your neutrinoscope is all right — if only because your stellar data look quite plausible. But the experimental uncertainties are such that it's not at all clear *which* model of supernova behavior the Nightsun is most closely approximating."

One of the others, next to the Prime Minister, looked at Eryk. "Then you do accept his claim that a supernova is likely?"

Eryk nodded. "Yes, and also that we couldn't survive one in our present state. *But*" — he held up a finger for emphasis — "the details of the prediction are very sensitive to which model describes what's happening. Tambori gives us an upper limit of about two centuries, based on the Malat model. The Dantof model can give no lower limit — it could happen right now. I myself am presently working on a new model which would set a lower limit of nearly a thousand years. Tambori's data could fit any of these models, and a long time would be needed to choose among them. But, of course, the time scale must play a great role in deciding what action, if any, we take. If there's no danger for a thousand years — we shouldn't worry about it. If it's significantly less than that, maybe we do need to start something. But if it's too *much* less, we wouldn't have time to accomplish anything, and it would be better not to have wasted our last efforts."

"How long would it take to accomplish anything?" the man next to the Prime Minister asked.

"It depends," said Bardof. "Small-scale shielding to protect a few people — to keep them alive, not comfortable — could be done fairly quickly. But to convert the whole civilization to go underground, protect itself against radiation, and survive intact for centuries — that would take many decades, even working under emergency priorities all the way. I don't know how feasible it is to keep people in an emergency frame of mind for decades at a stretch. And I'm personally not at all sure I'd want to live in the finished product."

"How about escape?" somebody else asked. Tambori hoped nobody would ask the one about "Is there any place to go?"

"I'm skeptical," Bardof said bluntly. "The problems are too huge. Escape obviously means interstellar travel, not just interplanetary. That means relativistic speeds — and we haven't even reached Embrel's escape speed. The energy requirements are staggering. And you'd need radiation shielding, both from the engines and from the interstellar hydrogen, and a closed ecology for the ship, and —"

"The best estimate of the time," Tambori interrupted, "seems to be a century or two. We could do a lot in that time. Maybe enough. We already have several types of nuclear engines. And I'd be more than willing to work on adapting my bulk antimatter work to

developing a new type with complete conversion efficiency and an all-photon exhaust — "

Bardof shook his head. "You underestimate the difficulties — "

"And you underestimate what people can do when they have to."

Bardof shrugged. "Maybe. I think not. I suppose space travel — even interstellar travel — is *possible*. But in less than a thousand years, Master Tambori? I seriously doubt it. Even if I'm wrong, you'll grant it would be a huge project and would ultimately benefit only a few. Is that fair?"

"Is it fairer to let *everybody* die? No, we can't save everybody the way they'd like to be saved. But we can probably save some. *If we start now*, we have a chance. Are you just going to sit here trying to stall off a decision until it's too late for anybody?"

"Not at all," said a cold voice at his left. It was Davon Reyd, and he had risen from his seat. "We've already reached a decision."

Tambori froze in his chair, eyes fixed on Reyd. "We took a vote," the Minister of Science explained. "This question-and-answer period was solely to give the panel a chance to clear up points of technical doubt that might change their opinions." He addressed the panel. "I didn't mean to cut you off, gentlemen, but I had the feeling Master Tambori was leading us a bit away from our intended purpose. Are there further questions?" He waited for an answer; none came. "Does anybody wish to change his vote?"

As he looked around the group, each man in turn shook his head. Reyd turned back to Tambori and sat back down. "As you see, individual panelists had reservations about the validity of your neutrinoscope data itself, the supernova interpretation, the time scale, and so forth. But, as a group, the panel was willing to grant you these points. But there was also a consensus that, very probably, it is not an immediate and urgent threat — don't interrupt; we've already heard what you're going to say — or, less likely, that it may happen relatively soon but there's really nothing we can do about it. In either case, supporting the programs you suggest would be unpardonably extravagant, inclined to produce general panic, and harmful to the public image of the Ministry of Science. And that means that ultimately it would be harmful to other, more fruitful fields of research. Please bear in mind, Master Tambori, that ultimately research funding depends on public support. At the very time you came to us, we were already re-examining our priorities in the light of certain...er...accusations. I've discussed your proposal with several other members of the Prime Ministry who were unable to be here today, but were alarmed — not at the idea of a supernova at some indefinite time, but at what you propose doing about it. For there *are* immediate and urgent threats which need our attention. The Prime Minister would like to summarize them for you. Most Excellent..."

The Prime Minister, a tall, solemn-faced centenarian with a perpetual slight nod, did not rise, but looked at Tambori. A respectful hush fell over the room. "This is a critical time in our development as a nation and as a people," the Prime Minister said, speaking

slowly and carefully. "The population of Embrel is rapidly approaching a billion, yet the old ways persist. Large families and long lives are the rule, and we have found them good. Yet some in Embrelmak fear that before long these things will lead to painful crowding, and urge the Growth Council to take measures to slow our growth before that happens. This would be the Growth Council's first major action in any of our memories – and many people fear that as much as the crowding threat. We don't know – are such extreme measures needed? What form should they take? Is now the time for them? We do know that crowding *can* be dangerous – Noffaz, our neighbor to the south, abolished its Growth Council long ago as archaic and potentially repressive. Now their growth-mad ways seem a threat to us. Some Embrelmakim fear an invasion by land-hungry Noffazim; others believe we should strike first to stop what they consider dangerous practices in Noffaz; still others fear the example Noffaz sets for our own citizens.

"We wish to make wise choices, but there is much we don't know. What *are* the consequences of further population growth – or forcible attempts to stop it? *Is* it dangerous to supplant nuclear and solar power with the burning of cheap fossil fuels – as Noffaz has been doing of late? We need answers to such questions, and there is growing belief that they must get a larger share of the limited research funds that exist.

"Your friend Kubram Eybruk has defended this need most eloquently. He has pointed out that some of the answers may have been known – and forgotten. Many things we know only as customs may have started for good reasons learned at great cost. The Growth Council, for instance – when was it formed, and why? Nobody knows. But if we did – if we understood our origins better – perhaps we could better understand our present problems. I am convinced that such work as Master Eybruk suggests *must* be supported – and that what you suggest, we cannot afford."

Tambori listened unbelievably. When the Prime Minister stopped speaking, he looked at Kubram. Kubram's face was stiff and expressionless. He said quietly, "I'm sorry, Raf. But I had to."

Tambori did not reply. He turned back to the Prime Minister. "Most Excellent," he said earnestly, "I could hardly deny the wisdom of what you say. But without survival, all the other questions become meaningless. *Both* kinds of problems need to be worked on – "

"Master Tambori," Davon Reyd broke in wearily, "your request has been examined and rejected. There is nothing more to say – except that, in view of the danger of panic, you must be ordered to say no more about this."

"*Ordered?*" Tambori echoed, whirling to stare at the Minister of Science. "And if I defy the order?"

"You won't have time to do much damage to anything but yourself. Because we'll be watching – and if you attempt to publish any threat of the Nightsun's explosion, in print, verbally, or otherwise, we'll catch it at the outset and stop it. You'll live out your life in solitary confinement under heavy automatic guard – and don't count on a public trial to

get you off and spread the word, because there won't be any. I'll invoke special emergency powers, and that will be all."

Tambori gazed at him in pure shock for a full minute. Then he turned to the Prime Minister. "Most Excellent," he said softly, "can he actually get away with this?"

The Prime Minister nodded solemnly. "It is necessary."

"And I have no chance for further appeal?"

The Prime Minister shook his head. "None."

Tambori sat silently for a long time, breathing heavily and looking straight ahead at nothing. "You're crazy," he said finally. "You're all crazy." Then he got up and left the room.

No one tried to stop him.

They did not leave Zenzdat right away. Raf wanted to remain in the hope that he could find some way to circumvent the gag Reyd had imposed. But with the Prime Minister backing the decision all the way, there was virtually no hope of changing anything by legal means.

Illegal means? If, somehow, the whole population – or a large part of it – could be roused all at once, they might bring enough pressure to bear to force the government to change direction. Or – more likely, Tambori suspected – they might react in much the same way as the Ministers and their special advisory panel. The result could not be known without trying – and the attempt, to have even a small chance of success, would have to reach an impossibly large part of the populace impossibly fast. Reyd wasn't kidding about how *he* would react to any attempt to spread the alarm – and every scheme Raf thought of would give him ample opportunity to squash it before it amounted to anything.

At one point he even considered taking what he knew to Noffaz. But Noffaz was scientifically somewhat backward, and culturally oriented in directions that would make its government even more hostile than this one to Raf's proposal. Besides, once Raf took that step, he would never be able to return to Embrelmak; and from all he had heard, he had no interest in spending the rest of his life in Noffaz.

He slept little those days, though he tried. His mind was too busy and too frustrated. Somewhere in that period Razel found out she was pregnant, and it even took an effort to celebrate that.

At first he thought he never wanted to see Eybruk again. But the questions his one-time friend had raised that night in the Tamboris's apartment continued to pound at Raf's awareness – and they pounded harder and harder as time went on. Gradually he sensed that all the half-seen things that had been nagging him since that night were being worked on by his subconscious – being fitted together into a single pattern. That was the way his major breakthroughs always came – and they were always agony until

the end, because his subconscious never let him see the pattern until it was finished.

It all fell together in the middle of the night, three weeks after his encounter with the panel. He sat suddenly bolt upright in bed, staring into the darkness at the picture the puzzle-pieces finally made – and the ragged places where pieces were still missing at the edges of the picture.

And he saw a kind of truth in Kubram's parting words that night that Kubram himself had missed.

He slept no more that night. At the earliest possible hour in the morning, he called Eybruk's university, on the west coast.

"Master Eybruk is away on indefinite leave," a flat-toned secretary informed him. "Who is calling, please?"

"Raf Tambori. Can you tell me where I can reach him?"

"Master Eybruk left instructions that he was not to be disturbed, sir, except – One moment, please." A long pause. "I'm sorry, sir, but your name is not on the list he left of persons whose messages he wished to have forwarded."

"But, I'm an old friend of his – "

"I'm sorry, sir, your name is not on the list."

"Look, I'll *pay* you to put me in touch – "

Icily: "I do not take bribes, *sir*."

The connection broke. He didn't try again.

After a long hesitation, he called Davon Reyd. He expected to have trouble getting through, but as soon as he said his name Reyd came on. Reyd had his video on, and as soon as he appeared he was scowling ominously. "I hope you're not trying to re-open – "

Raf cut him off. "Fear not. Something's come up and I need to get in touch with Kubram Eybruk. His secretary was no help at all, and I thought perhaps you – "

"Forget it. He doesn't want you to get in touch with him, and we're not going to go against his wishes."

"He *is* off on research, then, working under a grant from you people?"

"That's no secret."

"At Deymbak?"

"That *is* a secret. You've got the right continent, and that's all you're getting. Master Eybruk doesn't want to be bothered, and in view of your obvious animosity toward him after...what happened...I suggest you knock it off. Under the circumstances, your trying



to track him down looks more than slightly suspicious."

"But—"

"Be warned," Reyd said. "Or advised, if you prefer." He vanished.

Raf made a few more attempts to get information before he gave up.

Then he forced the thought of all the people he could not help away from him, and settled down to doing the one remaining thing he *could* do.

A century later he eased himself into a chair facing Kubram and curiously studied the face of his unexpected visitor, trying to imagine what had brought him here. He glanced beyond, at the blazing speck of the Nightsun dominating the south-western sky beyond the picture window, then back. The singing in the living room had resumed, but only a muffled trace of it got through the thick door of the study. "Interesting that you should ask about the omens," he mused finally, smiling slightly. "Of course, I haven't actually been very active at Delfan since the last time I saw you. I've been largely wrapped up in more lucrative endeavors, like industrial consulting."

Kubram said, "I never realized money was so important to you."

"Money," Raf observed slyly, "is an indispensable means to many ends."

"O.K." Kubram shrugged, faintly but visibly annoyed. "So you've been away from Delfan and making money. But you said the omens are not good. How...?"

"Technically, I still have my faculty post and my lab, and I still look in on the neutrinos occasionally—though, of course, the university's such a long trip from Trimbey that I don't often get there any more. I hate to admit it, but I'm getting old."

"And the neutrinos?"

"They're coming thick and fast. There's been a sharply accelerated rise in them lately. It doesn't fit *any* of the older theories very well, but it can't possibly be stable. I'm afraid the end is very near. I've been half-expecting it every day for a month. Every night I see it still just minus twelfth magnitude, I heave a big sigh of relief." He looked back and forth between the scene outside and Kubram's face several times, noting almost indifferently that all the impishness had long since vanished from the historian's expression. Finally he asked, "Did you come all the way out here just to ask me that—or did you bring me some news, too?"

Kubram nodded slowly. "I did. News...and an apology. It's too late to do any good now, but I've learned a lot since then. I retired some time ago, myself, but I've kept in touch with my colleagues and students carrying on what I started. You remember what I was after? Well, they've finally achieved it. They've traced it all the way back. Raf...man didn't evolve here at all. He came from another solar system. *I've seen their starships—at Deymbak!*"

Raf felt an odd mixture of excitement and detachment at hearing it confirmed. "I

expected that," he said quietly. "I realized three weeks after I last saw you that that could explain everything – they wouldn't have much time for history at first, but there'd be some things they'd want to be sure they didn't lose. *And proof of* it could also prove I wasn't talking visionary nonsense about the possibility of escape. I tried very hard to contact you and tell you about it – try to get you to channel some effort in that direction. Figured if you found them soon enough, maybe we could even short-cut our own learning process by picking up some of their tricks. But you burned your bridges too well."

"I'm sorry you couldn't reach me," Kubram said simply. "I really am, now. We were both so pigheaded we never thought of looking at what we were doing as complementary rather than competing. I see now that it practically had to be that. It explains the sameness...the things we'd forgotten...the things we remembered without remembering why..."

Raf nodded. "But there's no second chance, so let's not waste any tears on it now. Would I be able to look at their ships?"

"I thought you might like to." Kubram reached an uncertain hand into a deep pocket. "I think it can be arranged. Meanwhile...I brought you these." He pulled a bundle of thin photostat sheets from his pocket and offered them to Raf. "Diagrams and explanations," he said, "from the ships themselves. Actually, the ships were dismantled to equip the original colony. But the construction was modular, and we could recognize the pieces and see how they fit together."

Raf snatched the photostats and started through them quickly but intently. "The language is quaint," Kubram warned him, "but you'll be able to understand at least most of it..."

Raf hardly heard him. He was too absorbed in the contents of the documents. The deeper he got into them, the more positive he became that –

That was when the Nightsun blew up.

Quite abruptly, the scene outside the window was flooded with a cold, murky parody of daylight. Raf looked up automatically. He could no longer look straight at the Nightsun, and no other stars could be seen near it – for the sky there was no longer dark, and the brightness was spreading fast. Fast – even faster than he had expected – because the shock that initiates a supernova, deep in the core of a star, comes suddenly. But its influence on the surrounding envelope of gases, driving them furiously outward, persists long after, and Raf knew the brightness would continue to swell for days or weeks.

Enough of the new light spilled into the room to make Kubram, with his back to the window, spin around and try to look at the Nightsun at nearly the same instant Raf did. When he turned back around, his eyes were wide and his face was pale. "I didn't realize..." he whispered.

Raf was staring at the copied details of the ancient starships with a feeling he had never known before. "*We could have done it,*" he said finally, without doubt. "With a

century and a little luck, we would have had a good chance even on our own. If we'd had *these*, even twenty years ago – nothing could have stopped us."

Both of them stared at the photostats for a long time without saying anything. Then there was a worried knock at the door and Razel's voice called, "What's going on in there?" A pause, then she opened the door and came in. "Is anything – " And she stopped, her eyes glued to the window, staring in almost-shock.

Raf stood up and went to her side and shielded her eyes. "Don't stare at it," he whispered. Slowly her composure seemed to flow back into her. "You were worried about me and Kubram? No need. He just brought the proof that my hunch was right." He motioned at the papers he had left on his chair. "Plans and instructions," he explained, "for the ships that brought our ancestors."

"Raf," Kubram said nervously behind him, "you remember that night I asked you if man was worth saving and you got upset? Well, look, now, *we're* finished, but – "

"We're *not* finished!" Raf exploded, turning suddenly to look squarely at him. Kubram looked back with abrupt bewilderment, but at least he was back off the edge of hysteria. Raf turned back to Razel and patted her comfortingly. "O.K. now?" She nodded and even smiled slightly, neatly hiding the fact that for one instant she had started to cry. "This is the time," Raf told her. "Go round up the others. Keep them calm; I'll join you in a few minutes. I checked the entrances just yesterday. Everything's fine."

She didn't close the door when she left. And when Raf turned back to Kubram, the historian radiated frank puzzlement. "What," he asked, "was *that* all about?"

"Reyd – and you, and the others – wouldn't let me try to save everybody. But did you think that, knowing what I did, I'd cheerfully consign my own family to extinction? No way! You know what's under these hills? Caves – the largest continuous system known on Embrel, and they run deep. Deep enough to provide shelter from what's starting now. That's why we moved out here, and why I spent so much of my life gathering money. It's not cheap to equip part of a cave as a self-sufficient permanent shelter for dozens of people, with one of its entrances concealed in a house on the surface – but that's what Razel and I have done. And we'll all be moving in very shortly."

Kubram looked at him in amazement. "Do you really think it'll work? You really think you can live that way?"

"I think we're going to give it a good try. Will you join us?"

Kubram looked startled. "What?"

"Will you join us? Look, I'm not going to hold an old grudge against you now." He grinned impishly. "Besides, you know about the ships. I think there just may be a chance some of us can look in on those and someday learn to resurrect, or at least copy, one of them – and go exploring."

Kubram frowned. "To do that you'd have to go traveling on the surface. I thought – "

"Oh, we'd have to restrict it to people who are past reproducing age, all right. But

there'll always be some of *us* around, I trust, and they should be able to go abroad occasionally, with care. We've always assumed they'd have to, in fact. How about it? Are you with us?"

"Well," Kubram said doubtfully, "I'll give it a try. And as I started to say before, if *we* don't make it, at least we know now that the species won't die with us. Because there are others elsewhere..."

Raf paused to think about that. It was true enough, but...

In the living room Razel had told them – and they were singing again. It was a sprightly song of the coming spring which his youngest great-grandson had composed, and Razel was singing with them.

"It wouldn't be the same," he said finally. "Let's go."

He turned out the electric lights as they left, but the room continued to brighten behind them.

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