

Communication

by
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Richard Tailer gazed thoughtfully through the porthole window, scratching the stubble on his chin. Outside, ruddy light from the puny little sun glinted faintly off of the metallic surface of the starship, staining the cloudscape below a dark reddish orange. In the distance, near the terminator dividing day from night, a lighter swirl announced the presence of a storm. Tailer gave it only the briefest of glances before resuming his scowl.

What a waste, he thought. *What a big, stinking waste this entire lousy trip has been.* Eleven systems and not a speck of life. Vacuum-encased rocks, crushing poisonous atmospheres, temperatures hot enough to boil steel. Everything dead. He thought back to his previous assignment and wished he had stayed with Alicia on Bronson V, studying the nocturnal habits of Tauri electric locusts. But their last bitter, acrimonious fight had slammed the door on that option. And since the *UES Altair* just happened to be in orbit, delivering supplies to the scientific outpost, and the position of exobiologist was vacant...

New life and new civilizations.

Where were they?

Still, he mused, not everyone on board was unhappy. The geologists had had a field day with the sandblasted cliffs, ancient water-carved pillars and vast caverns of their last stopping place. They didn't care that the sun of that planet had long since swollen into a red giant and boiled away the oceans and atmosphere, killing whatever life there might once have been. Their life consisted of dead rocks, poison-belching volcanoes, and impact craters.

Tailer, on the other hand, thrived on the living, on new and exotic organisms, on alien intelligences such as the Phasni'e. Originally hailing from Vancouver Island in Canada, he had studied exobiology at the University of Washington down in Seattle, then headed out to the stars on board the *UES Canopus*. It was on that ship that he had met Alicia Lloyd, a petite, very cute redhead from Wales who was looking for material for a doctoral thesis. Since he was rather short himself, although stocky, they were a perfect match. And their interests ran along similar lines as well. When the *Canopus* reached Bronson V Alicia had found what she wanted. And Tailer had gotten off as well just to stay with her.

It hadn't lasted.

There was more to a relationship than mere physical compatibility and similar interests, Tailer soon realized. Habits, personality traits, even such ridiculous things as which way to roll the toilet paper all mattered more than he cared to admit. By the time the *Altair* arrived, he wanted nothing more than to get away from her, preferably to the other side of the cosmos if possible.

He was beginning to regret his decision.

Right now the *Altair* was orbiting the second planet of a small, class-M star somewhere in the constellation of Virgo; a hot ball of rock and stinking poison a bit smaller than man's home world. The atmospheric scientists were down in the shuttle bay loading their equipment, talking gaily of coriolis storms, getting excited about jet streams and inversion layers, and working themselves into a frenzy over chlorine and nitrous oxides. Tailer felt like going down and suggesting that they try breathing it instead.

I'm not quite thirty, he reminded himself. And the ship was already on the return leg, heading back toward Earth. Maybe when he got home he would hear about some new and exciting discovery, some exotic planet where he could go and engage in his passion. On the other hand, he thought sourly, maybe Alicia would also hear about it and beat him there. Actually, that might not be as bad as he imagined, he mused from the perspective of six months apart. Maybe they could patch things up...

Yeah, his other self snarled, *and there are little green men with feelers on Mars*.

A movement caught his eye. A small, silvery arrowhead detached itself from the *Altair* and drifted away toward the dark orange cloudscape below. *So they're off*, he thought. They finally talked the captain into letting them go down. Well, it was the only world in this solar system with an atmosphere that wasn't a gas giant, so he could see their point. He watched as the shuttle fired its thrusters and began to descend, until it was lost against the backdrop of the planet. Bored practically to tears, he turned and drifted out into the corridor, resigned to yet another thoroughly uninteresting day.

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"What do you mean there's something alive down there?" Tailer exclaimed. "In that witch's brew of an atmosphere? You've got to be kidding!" He looked at the viewscreen askance. "This is a joke, isn't it? Come on, Rita, don't play games with me."

It was nearly seven hours since the shuttle had vanished into the roiling mass of poison below. Tailer had eaten, caught up on some research notes, then dropped off to sleep. Ten minutes ago his buzzer had sounded and the bridge watch officer informed him that someone down on the planet wanted to talk to him.

Rita Kenn was a chemist, an older woman in her mid-forties who had been on a half-dozen deep space missions. Alien atmospheres were her specialty. Unlike most of the other physical scientists, she at least had a grudging respect for biology and to an extent shared some of Tailer's disappointment with this voyage. Now, as she sat on the other end of the connection and claimed that the exploration team had found life, he was puzzled.

Although life had been found on worlds with conditions too extreme for human habitation, to date every one of those worlds had possessed an atmosphere containing oxygen, and temperature and pressure within a reasonable range. To expect life on this horror of a planet was like expecting to find ice cubes in the sun. His first reaction was that someone was playing a joke on him. Rita wasn't the type to do something like that, though. On the other hand, Nick Telos or Helen Jurgens would probably think it was hilarious. Maybe they had gotten Rita to play along, unless they had managed to fool her as well. He doubted that. Rita wasn't stupid. Her voice came back at him from the speaker.

"No joke, Dick. At least Nick thinks it's alive—"

"Nick?" Sure, this was a joke.

"Yes, Nick. We first thought it was some kind of mineral formation, but it isn't. Nick found chemical activity around it. At least around parts of it—"

"What kind of chemical activity?" Tailer interrupted. For a joke this was starting to get out of hand. He began to wonder what was really going on.

“Gas exchange,” was her reply. “Some parts of the thing are taking in chlorine and giving off a number of other chemicals.”

“Well, what does that prove?” Tailer wanted to know. “Remember the Shine Crystals on VGD 348?”

Rita’s reply was sarcastic. “Of course I remember. I’m not senile, you know.” The sarcasm faded and the scientist returned. “But those things looked like crystals. This thing doesn’t. Though it does sort of look like some sort of outlandish industrial complex...” Her voice trailed off.

Something finally got through to Tailer. “‘It’? What do you mean, ‘it’? How many of whatever it is you found are there?”

“I know this sounds strange, Dick, but it looks like there’s only one. Unless it’s some sort of colony or something. Or maybe there’re more on the other side of the planet. I mean, we really haven’t explored very much down here.”

Tailer paused and sighed. Okay, she had finally convinced him that this wasn’t a joke. On the other hand, none of them were biologists. Apparently they had found something unusual. But was it really alive? Try as he might, Tailer couldn’t get rid of his doubts.

“Look, Rita,” he finally said, “are you really sure about this? Are you sure you aren’t just feeling so sorry for poor little old me stuck up here with nothing to do that you’ve convinced yourselves you’ve found something I might be interested in?”

Rita swore at him. “Listen, you self-righteous prig,” she said, “if you weren’t feeling so sorry for yourself you might give some of us credit for having brains, you know. I don’t give a rip about your feelings, okay? If you want to just sit up there and whine and forget about this, it’s your problem, not mine.” Her image reached forward to cut the connection.

“Hey, wait!” Tailer said hastily. “I’m sorry. You win. I’m coming down.” There. If she really wasn’t serious, now was the time to say so. Captain Huart would not be at all pleased if he wasted fuel on a useless shuttle run. The captain was a stickler when it came to conserving necessities. Tailer waited for Rita’s response.

She calmed down somewhat. “Good,” she said. “See you in a little while.”

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Tailer glanced outside and behind at the receding starship. He had always considered mankind’s vessels lacking in grace, merely functional machines for conveying people around the galaxy. The *Altair* was no different. Maybe someday, when technology had advanced sufficiently, the human race would build a beautiful starship. But for now, the long, instrument-studded cylinder served its purpose without pleasing the eye. He turned around to face forward again.

Ahead and below, the dark orange-red cloudscape was rushing up to meet the shuttle. Mountain-high masses of poisonous fumes loomed on both sides as the pilot swerved to enter a dark canyon leading down into the lower atmosphere.

“Scary, isn’t it?”

Tailer looked over at the speaker. Elsa Winger was his age, a dark-haired beauty from the colony world Armstrong, and like him, on her first deep space mission. Armstrong was a very mild planet with very little in the way of severe weather. He smiled.

“Don’t worry,” he said. “They do this all the time.”

Behind him, Dave Kacharin leaned forward. “Besides,” he pointed out with a grin, “Mr. Chips really does the flying. He doesn’t goof.” Mr. Chips was their colloquial term for the onboard computer.

Elsa and Dave were Tailer’s associates from Life Sciences. Since he had joined the crew with at least one voyage under his belt, even if a very short one, Tailer was nominally in charge. He had to admit, though, that Elsa was a better administrator. And Dave Kacharin, who was

actually doing an internship as part of his graduate program, was definitely more imaginative. Whereas Tailer had greeted Rita Kenn's announcement of finding something alive on this horrible world with considerable skepticism, Dave hadn't even blinked. Elsa's reaction had been somewhere in between.

The shuttle bumped over a cirrus layer, then nosed down into the darkness. An orange haze like Titanian smog enveloped it, and the buffeting increased. The haze grew darker, and the pilot switched over to instruments. Tailer returned to his musings about just exactly what the exploration team had found.

Most likely, he thought, it would turn out to be some sort of natural, non-living function of the planet, some collection of minerals undergoing chemical processing. It wouldn't be the first time. After nearly a hundred years of interstellar exploration since the development of the quantum drive, the universe had never failed to live up to expectations of being stranger than anyone could have imagined.

Whatever it turned out to be, though, Tailer and his crew were in the clear. Before departing the *Altair* he had personally cleared this excursion with the captain and with Benson Wymer, the chief scientist. If it turned out to be bogus, it would be Rita and the exploration team getting chewed out, not Tailer and the Life Sciences gang. With that in mind, he decided to simply relax and enjoy the chance to get out of the ship. Even this crummy planet was better than four walls.

They broke through the cloud cover about a thousand meters from the surface. Beside him, Elsa leaned forward for a better look. Tailer didn't bother; he had seen enough alien planets and this was just one more. Somber, reddish light illuminated a dead, rock-strewn surface. Up ahead, a mountain range hid the horizon, its tops lost in the lowering clouds. As they watched, the distant peaks were thrown into sharp relief by a flash of white light behind them. It dimmed, flickered, then flared again. Tailer thought he saw a lightning bolt leap from some hidden point into the overhead fumes. As they continued their descent it flashed repeatedly at irregular intervals, like a stroboscope with a faulty timing circuit.

A line of low hills appeared directly ahead, and the shuttle aimed toward a saddle-shaped gap. A minute later the hills swept past them, and Tailer could see that they really formed a circle, with a cup-shaped valley in the middle. Off to one side he caught sight of a metallic glint with several suited figures around it. One of the figures waved, and the pilot steered toward it. The shuttle slowed rapidly. A series of klunks announced the deployment of landing gear.

Suddenly Elsa leaned forward and pointed. "Is that it?" she asked. Tailer followed her finger to see what she was indicating.

"What the devil..." he started to say.

Now that he saw it, he was surprised that he hadn't noticed it before. A collection of reddish yellow formations, resembling squat towers, domes, flattened disks and other outlandish shapes, covered a good portion of the valley floor. A series of tubes like enormous vines wound among the individual objects and interconnected them like gigantic conduits.

"If that's what it is, I can understand why they called us," Dave Kacharin murmured from behind. "Look at it! It's huge!"

It doesn't really look organic, Tailer thought. *More like a huge factory complex. On the other hand...* He shook his head in puzzlement.

Elsa grinned. "Well, whatever it is, we'll soon find out. I hope," she added.

The forward motion of the shuttle had ceased. It hovered momentarily on lifting thrusters, then gently settled to the ground.

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"Calling it an 'Organism' doesn't make it one."

Elsa looked up at Tailer in irritation. "Maybe not. But we've got to call it something. Got any better suggestions?"

He shook his head. Several hours of running around in spacesuits and peering at the various components that made up the object hadn't given a single clue. Overall, there was a logical pattern to it that made Dave Kacharin favor the theory that it was some sort of outlandish factory built by some unknown alien civilization. "A sort of von Neumann machine," was his variant. "You seed a planet with some kind of self-replicating whatsit and it builds itself according to a programmed plan." When Tailer pointed out that this was basically what living organisms did, Dave replied that living organisms didn't have smokestacks.

The squat towers were open at the top and gave off gases reminiscent of reaction products. Other components, resembling irregular carpets, absorbed chlorine from the atmosphere and minerals from the ground. Some kind of processing was taking place. But to what purpose, no one had the slightest idea. "If it is a factory," Tailer had demanded later, "what does it produce?"

They had quickly come to realize that what they had here in the valley was just a part of a greater whole. A number of the interconnecting tubes came together in a nexus, from which a much larger one led through a low pass and out of the valley completely. There were already plans to take one of the shuttles and see where it led.

Tailer grinned. "How about just calling it 'the Thing'?"

Elsa made a face. "If you want to, go ahead. But don't expect me to call it that."

He sniffed. "Well, it's better than 'Aliens, Incorporated'." That was Dave's suggestion.

"Too many syllables," she said in agreement. "Though I suppose that makes it more politically correct."

"Hunh?"

"You know. The more syllables, the more politically correct it is. Why say 'Black' when you can say 'A-fri-can A-mer-i-can'?" Tailer snorted and went back to working on some computations.

A little while later he lifted his head and shook it in exasperation. "I'll be spaced if I can figure out where it's getting its energy from," he muttered. He rubbed his outsized nose with two fingers (a habit that resulted in numerous jokes on board the ship). Elsa looked over, query in her expression.

He pointed to his comp-pad display with a stylus. "Look here. It takes in chlorine and minerals from the ground..." he indicated a couple of entries, "...and gives off these gases from those smokestacks. You don't get enough energy from any conceivable reaction to even light up a bulb. So where's it coming from?"

She shrugged. "Photosynthesis?"

He shook his head firmly. "Unh-unh. No way. Not with this cloud cover."

"Maybe it's not in visible wavelengths," she suggested. "It's more in the UV on Phesnu, remember?" The home world of the Phasni'e circled a hotter, bluer star than did Earth. "Maybe it's in the radio here."

He looked doubtful. "It'd take one heck of a big collecting surface to make it work. Unless its metabolism is like molasses. I doubt that. This planet's too hot—"

"So how about plain heat?"

He shrugged. "Maybe. Who knows? This is all just guesswork."

Elsa leaned back in her chair and sighed. "Our problem is that we don't have any points of reference."

"What do you mean?"

"I mean, we've never run into anything like this before, so we don't have anything to compare it with. We may have to invent a whole new category to put it in. I keep saying it's probably alive. Dave says it's some kind of factory. Heck, maybe we're both right."

"That's... that's really weird," Tailer finally managed to say.

She looked him squarely in the eye. "Somebody out there probably thinks human beings are really weird, too." She held his gaze for a moment, then dropped it.

“Right now I don’t really care,” she went on. “I don’t think we *can* know what it is. Maybe later, but not now.”

“So what do you suggest?” Tailer asked.

“For now? Let’s just try to figure out how it works. Okay? We can worry about classifying it later.”

Tailer paused to consider her words, then nodded. “Okay,” he finally said.

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Taking off was not anywhere near as nerve wracking as atmospheric entry, Tailer decided a little while later as the shuttle rose on lifting thrusters, gently swaying back and forth as the pilot trimmed attitude to compensate for weight distribution. At least you didn’t risk burning up if you missed your angle. Of course, there were other considerations. He grinned at the thought of trying to set trim with Tony Zdroik walking up and down the aisle. Tony weighed nearly a hundred and forty kilos.

The main engines engaged with a roar and the shuttle lurched forward. It quickly picked up speed, and within a few seconds the pilot was able to shut off the belly thrusters. In this thick atmosphere the wings achieved lift at relatively low velocity.

They leveled off at around a hundred meters, flying above the large tube as it wended its way up and out of the valley. It climbed into the low hills, through a narrow pass, then emerged into a vast plain.

Tailer whistled, staring out through the windshield at the vast sprawl spread out before them. “Whoever said there was more of that thing sure knew what they were talking about,” he murmured. “Look at the size of it!”

As far as the eye could see, the plain was covered with more of the same kinds of structures that they had found in the valley behind them. The variety of shapes was incredible. The tube that they had followed disappeared into the larger mass, a small tributary lost in the overwhelming profusion that lay before them. On the horizon they could see the same mountain range that they had spotted while descending earlier. And the same stationary lightning continued to flash and flicker just beyond.

Without being asked, the pilot swung their flight path toward the largest of the alien structures, a group of huge, irregular puffs like gigantic cauliflower, towering nearly three hundred meters into the sky. Even from this distance they could see dozens of enormous tubes running out from the central mass, splitting and rejoining, connecting to a myriad of other objects in a bewildering maze of complexity. The same reddish yellow color predominated, though here and there Tailer caught a glimpse of other shades.

“Whatever this thing is, it ought to put us in the running for an Asimov Award,” Elsa murmured. The Asimov Award was one of the most coveted prizes among space exploration teams, generally given to the crew of whatever starship made the most significant discovery of the year.

“I’ll take it,” Tailer said with a grin. “I just wish we knew what it is.”

He remembered her earlier comment that both she and Dave might be correct; that it might be both a living organism and some kind of alien factory. Really weird, but who knew what a really advanced alien technology would be capable of? He recalled Dave’s idea, and an image of a seed pod being planted by a group of bug-eyed, methane breathing creatures from the far side of the galaxy popped into his head.

The shuttle approached the central complex. *Like a huge brain*, Tailer thought. *Maybe it’s some sort of brain. Maybe this is where the whole thing is controlled, whatever it’s supposed to be doing.*

But what *was* it doing?

That was as big a question as wanting to know what it was.

Whatever it was, it took no apparent notice of the shuttle as they flew past, within a few hundred meters. The pilot made a single circle around the center, then Tailer leaned forward and pointed. The shuttle straightened out and headed off, running parallel to the mountain range.

"Maybe it covers the entire planet," Elsa speculated as they reached the edge of the plain. Ahead lay a jumble of low hills and ancient, eroded craters. The vast complex halted about a kilometer short, but Tailer counted no less than a dozen tubes, similar to the one connecting the main mass to the portion in their valley, winding away into the distance.

Tailer had the pilot turn them around, and they headed back. This time, they angled toward the mountain range, aiming for the point where the huge lightning bolt still flickered ceaselessly. As they approached, they saw four more of the tubes, considerably bigger than any others, leading from the complex and up through low-lying passes, aimed directly at the vast electrical discharge. The pilot chose the largest of the passes and turned to climb toward it.

The pass was just low enough that they did not have to enter the clouds. Tailer was silently thankful; even though the shuttle had excellent terrain-mapping radar and could fly in total darkness, it was still nerve wracking. As they passed above the tube, he estimated its diameter at nearly six meters.

They could now hear thunder rumbling in the distance as the shuttle twisted and banked, following a crazy zigzag path through the mountain peaks. On both sides, smooth, faceted black rock stood outlined in stark relief, illuminated by the tremendous flickers. Overhead, clouds swirled in agitation, disturbed by the immense energies up ahead. Then the shuttle negotiated a final bend and emerged into the open.

A wide plateau greeted their eyes, several kilometers across and almost perfectly flat. All around, mountain peaks thrust upward into the misty heavens like an encircling wall. And in the center of the plateau stood an immense spire like a titanic lightning rod. From its brilliantly glowing peak continuous bolts flashed into the cloudy mass overhead.

The spire rested on a wide base, from which scores of immense tubes led to enormous, pillow-shaped objects further interconnected by the vine-like network. The tube that they had followed from the plain ran up and connected to one of the pillows. Now Tailer could see that the remaining three tubes from the plain also ran up to the same pillow. From other pillows more tubes ran, leading out through other passes.

"Well, I think we've found out how it gets its energy," Elsa murmured, gazing at the scene. "There's probably enough power here to light up a good sized city."

"Yeah," breathed Tailer. He turned to face her. "You still think it's a life form?"

She shrugged. "Why not? Is there any law that says life forms can't be electrically powered?"

He snorted. "On Earth there is."

"This isn't Earth."

"No kidding..." He leaned toward the pilot. "I wouldn't get too close to that thing."

"Absolutely I will not get too close to that thing," the pilot replied fervently. He swung the shuttle in an arc and they began circling the spire, maintaining their distance.

"I wouldn't even want to get outside here," he said in an aside to Elsa. "There's probably enough static potential to fry us the instant we step out the hatch."

She nodded agreement. "Maybe we can send someone back to drop a probe."

"Okay," Tailer replied. "But tell them to make it a tough one."

A few minutes later the shuttle broke off its orbit and headed back to base.

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Night was falling as the shuttle arrived back in the valley. The other shuttle was gone, and the third and last one in the *Altair's* complement was just landing. As they set down they saw three suited figures emerge from the other ship and head over to the temporary shelter. They

waited at the airlock as Tailer and his companions emerged, then everyone stepped inside. As the foul atmosphere of the planet was pumped out Tailer recognized Benson Wymer through his faceplate. *I guess they're really taking this seriously upstairs*, Tailer thought. Wymer was notorious for refusing to leave the starship unless the planet did not require spacesuits.

Fifteen minutes later everyone was sitting around the tiny table in the crowded joke that the engineers called the "kitchen" in the Insta-Shelter, drinking instant cups of instant coffee (which usually resulted in instant heartburn). Except Wymer, of course. He had brought a bulb of beer down with him (and refused to share, which did not endear him to Tailer). When everyone was present and conversation had died down, Wymer spoke.

"Well, folks," he said with false joviality, "I guess I ought to tell you what brings me down here." Nobody said a thing. Wymer was stating the obvious. He went on.

"I've been looking over the data you've been sending up. Very impressive. Now I know you still don't know what this thing is, but it's obviously unique in our experience. So the first thing I've done is had this object declared an Alpha Class find."

Tailer was impressed. He didn't care for Wymer's pompous manner and speech, but he had to admit that the man was competent in his way. Nominally, he was a physicist, though in recent years he had tended toward administration, which made him a perfect choice for chief scientist on a starship, at least in the eyes of Fleet bureaucrats back on Earth. The others could do the real science. Wymer handled the paperwork, and did it fairly competently. And having this declared Alpha Class basically put the mission under the control of the scientists. Captain Huart could complain all he wanted, but regs were regs.

Wymer looked around at the faces and nodded in satisfaction. "I thought you would welcome that development." He cleared his throat. "Now, up to this point our investigation has been rather haphazard. I intend to put a stop to that." Tailer scowled, but said nothing. Wymer continued.

"So far, you have done an admirable job of observing. You have measured gases, taken pictures, even flown around a bit to get an idea as to its scale. Incidentally, that was a marvelous find, that electrical tower. Krannon up on the ship is measuring atmospheric properties at that location and will attempt to discover if there are any more such electrical interfaces elsewhere on the planet.

"But," here he grew intense, "have any of you tried a more direct approach? Has anyone taken even a surface sample for chemical analysis? How about measuring electrical or magnetic fields? Radiation?"

Tailer winced slightly. Sure, given time they would have eventually done most, if not all of those things. But for now he had simply wanted the big picture. Leave it to a physicist to want to poke it and prod it with instruments...

Wymer was speaking again, Tailer had missed some of it, but now picked up the tail end of what the chief scientist was saying. "...it up and down the spectrum, and if necessary, and I believe it will be, cut it open with a laser and examine it."

At that last part Tailer reacted. "Hey! Are you crazy?" he exclaimed. "What do you mean 'cut it open'? Do you have any idea what that might do to it? You might kill it!"

Wymer looked a bit startled. "I hardly think I'll do that. I'm not talking about hacking it to pieces. I'm talking at most about a cut about a meter long. The thing's enormous! It won't even feel it." He grew sardonic. "Assuming, of course, that it can 'feel'. I didn't think you believed it to be alive."

Tailer subsided a bit. "Well, damage it, then. Same thing."

"Oh, come on Dick," Elsa put in. "Wymer's right. As big as it is, it won't even notice."

Wymer spread his hands and smiled. "All we want to do is find out what it's made of. What's wrong with that?"

“Well, how would you like it if some inch-tall Bugmen came along and wanted to slice your little finger open to see what you were made of?” Tailer demanded in exasperation.

Wymer smiled at that. “‘Inch-tall Bugmen’ don’t exist. And even if they did what we’re talking about isn’t the same as attacking an intelligent being.”

“Well, how do we know it isn’t intelligent?” Tailer shot back.

Wymer rolled his eyes. “Next you’ll be telling us that big cauliflower thing you found out there is its brain. Be reasonable!”

“How do you know it isn’t?”

“Dick, you’re being ridiculous,” Elsa snapped. The others murmured agreement.

Tailer slammed his hand on the table. “Now hold on a minute! Listen to me!”

He waited for the hubbub to settle down. For a moment it looked like Wymer was simply going to plow on, but something in Tailer’s expression stopped him. “Okay,” he finally said when everyone was silent, “maybe it’s ridiculous to say this thing might be intelligent. But my point is simply, *how do you know?*” Nobody said a word. He nodded slowly.

“I think you see my point,” he continued. “You wouldn’t dissect a Phasni. You wouldn’t even slice its little finger open without permission. Why? Because you know it’s intelligent. But...” he raised his hand, index finger extended, “if you ran into one out in the wild would you even know it was intelligent?”

Everyone knew the story about humanity’s first contact with the Phasni’e. An overzealous explorer thought that the party sent out to meet them was a flock of wild birds attacking, and shot two of them before he realized the truth. It was not a very good beginning to man’s first contact with intelligent aliens.

Tailer nodded again. “Maybe we’ll end up having to do like Wymer suggests and cut it open. But I really think we should save that for absolute last, and only if necessary.”

One by one, everyone indicated agreement. Wymer was the last. “Look, Dick,” he said, “I don’t mean to get you upset about this. I’m only trying to do my job.”

“Fine,” Tailer replied. “Just let me do mine.”

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So how do you determine if something is intelligent? Tailer said to himself.

He was tired. Nearly fourteen hours had passed since landing on this lump of poison and he was ready for sleep. Unfortunately, his brain was not. Try as he might, he could not get that organ to slow down and save its musings for later.

He thought back again to man’s early encounters with the Phasni’e, nearly fifty years earlier. Nobody on that expedition had expected to find intelligent life on that moon. It was unusual enough to find a moon that had life in the first place. However, in this case the moon was nearly the size of Earth and circled a heavy terrestrial planet with a dozen times its mass. It was not quite habitable—by human standards. The temperatures were hot enough that anyone out in the open would quickly succumb to heatstroke. And in addition to the necessary oxygen and nitrogen, the atmosphere contained just enough extra, exotic components to render it mildly toxic to terrestrial life. It would kill you slowly and very uncomfortably.

With continuing contact scientists gradually came to realize that the Phasni’e were an extremely old race. Fragments of historical records and archeological evidence suggested that they had been civilized for at least eight hundred thousand years, and maybe as long as a million and a half. But their cultural orientation was so completely alien that it was difficult for humans to even conceive of it. In all their long history they had never even envisioned the idea of space flight. They had no weapons. War was something that they had no concept of. But in other areas they were so far beyond humanity that it couldn’t even be grasped, especially in areas of biology and mathematics. And to them, the economic systems that men fought to the death over were all laughably primitive.

Physically, they possessed two arms, two legs and two wings. Like all other life forms on Phesnu, they were tri-sexual. Every adult Phasni used biological cerebral enhancers, tailored to fit their interests and orientation. They considered eating meat or any other animal product to be extremely disgusting. They would not eat in the same room as a human being.

Tailer thought again about the first contact incident.

The *UES Mahatma Gandhi* had entered orbit after the surprising discovery of life on a moon. They had not detected any electromagnetic emissions or any other sign of civilization. However, early images of the surface showed huge, orderly arrays of artificial structures reminiscent of cities. Other photos showed land under cultivation. Overall, the planet presented a peaceful, almost park-like appearance. Puzzled yet excited, they sent down a shuttle.

The shuttle did not land in or near any of the cities. They chose a spot at the edge of a forest, near what looked to be farmland. Shortly after exiting, they spotted a group of seven large bird-like creatures headed their way. The group of birds swooped over the assembly of space-suited humans, circled once, then returned. One of the landing party decided that these were hostile animals preparing to attack, drew his laser pistol and burned down two of them. It was only when the rest immediately dropped to the ground, huddled, then approached slowly and cautiously that they realized that these were the intelligent creatures they had come to find.

So how does that help here? Tailer wondered.

The main issue, he finally decided, was communication. When the landing party had first seen the Phasni'e approaching, the method of approach communicated hostile intent. Later, when they dropped to the ground, what came across was intelligence.

Half of that exchange had been misinterpreted.

Communication is essentially an exchange of information, he realized. And information is more than just words and ideas; it can also consist of such things as emotional content and attitudes. Sometimes it is merely an appearance, which conveys essentials like size, color and such. Humans basically communicate by means of language; oral, written and non-verbal.

And how often do we screw up that simple exchange?

He remembered the last two days before blasting up from Earth to the shuttle waiting to take him to the *Canopus*. There were several spaceports on Earth, but the one he had been assigned to had been the Baikonur Cosmodrome in Russia. Most of the people involved in the space program there spoke English, but he could still recall trying to ask a cleaning woman where the bathroom was. His English was probably as incomprehensible to her as her stream of Russian was to him.

He thought about the hours he had spent on the *Canopus* with Alicia, learning that "no" really meant "yes" and vice-versa. And how many different interpretations were there of "That's okay, honey."? "No, that doesn't bother me."?

Or just "I love you."?

Was it any wonder that first contact with a truly alien species had resulted in a tragic misunderstanding?

Later, humans discovered that their mistaken actions had had even farther reaching consequences than they had originally imagined. Since the Phasni'e had never even conceived of space flight, they had absolutely no concept of physical, corporeal life beyond their atmosphere. When the *Gandhi's* shuttle had landed, the first humans had been mistaken for messengers from God Himself. And when those messengers killed two of the first Phasni'e that they met, that had been taken as a sign that God was displeased with them as a race. It had taken nearly three years to undo the damage from *that*.

Even today, after fifty years of contact with humanity, the Phasni'e still exhibited no interest in the stars. They could not travel in human ships without environmental suits—they found terrestrial conditions terribly cold and the atmosphere lacking in vital components—so they demurred.

And humans could not understand what was to them an excessive preoccupation with form and protocol.

Each species' literature was meaningless gibberish to the other. Even basic language concepts—grammar and phonology—did not translate. Phasni vocal apparatus produced a range of sounds that human ears could not differentiate and human lips could not utter. And neither could Phasni'e reproduce human sounds. Early, limited communication had been by gesture. It was only in the past twenty years that Phasni scientists—not human scientists—had developed a biomechanical translator device enabling the two species to talk to one another directly.

About the only thing that did easily translate was mathematics. Mathematics was ultimately based on the fundamental laws of the universe, and they were the same on Phesnu as on Earth. Once a translation matrix was put together for symbols and conventions, it was straightforward.

Maybe that's the key, Tailer thought, returning to his musings about the enigmatic object outside. *If it is intelligent, it should at least understand simple things like numbers. Could we try sending it a series of integers or something like that?*

Again, the question was *how*. There was nothing obvious such as ears or eyes; there wasn't anything that could even be conceivably recognized as a sense organ. Radio waves? Sound waves? Maybe chemical agents?

Where did one begin with the totally unknown?

Another thing struck Tailer. The object, whatever it was, was alone. Maybe it didn't even understand the *concept* of communication. Unless it was in some kind of radio contact with other, similar objects out in space somewhere. But nobody had detected any radio emissions from the planet, so that was unlikely.

Wymer's probably right, he thought as he felt himself finally drifting off to sleep. *And even if it is alive, like Elsa and Dave said, it's highly unlikely that it's intelligent. Maybe it's some kind of plant... Maybe it's something completely new, neither animal nor plant...*

I just wish we could know...

Tailer finally fell asleep.

* * * * *

The planet had a rotational period of just over twenty-one hours, not too terribly different from that of Earth, so when Tailer awoke it was to sunrise. Or at least what passed for sunrise on this cloud-shrouded world—a murky reddish-orange light slowly spreading across the sky to herald the onset of day.

After a quick breakfast consisting of freeze-dried scrambled eggs and sausage and reconstituted orange juice—Tailer didn't hate it as much as some of his fellow crewmembers—he set about rounding up equipment. He was on his own; Wymer had made it clear that this was his own little rabbit trail to follow and not to expect any help. Tailer got the impression that Wymer considered it a stupid waste of time, but in spite of his faults he at least tried to be fair.

Morning reality wasn't any clearer than nighttime musing. The issue was simple: Tailer didn't want Wymer slicing the whatever-it-was open with a laser. But in order to prevent that he had to come up with a valid reason. If he could communicate with it—even something as basic as "Hello, I'm here!"—Wymer would back off. But like he had agonized over last night, just where did one begin?

Standing outside, encumbered in his heavy environmental suit, he wondered—not for the first time—why this was so important to him. Would he have been so obsessed if Alicia had been with him?

What would Alicia have done if she had been here in his stead?

Tailer slowly made his way over the rough, pebble-strewn ground to the nearest portion of the giant object, a section of tube running between a low, dome-shaped component a few hundred meters away and a nearby tower. Gravity was somewhat lower than Earth normal, and even with

the heavy suit walking wasn't too difficult. In the distance he saw a couple of other figures setting something up. One of them waved briefly.

The tube was not perfectly smooth, he saw when he got close. The surface was slightly rough and irregular, resembling frozen yellowish dirt. He put a gloved hand on it. Of course, he could feel nothing. But the symbolism nevertheless sent a thrill through him.

"What are you?" he murmured softly. "Why are you here?"

There was no answer. His suit transmitter was off and the world was silent, except for the low moan of the wind and occasional distant rumbles of thunder. No birds, no traffic noises, no constant murmur of human voices.

He reached into a pouch at his waist and drew out his first instrument. It resembled a doctor's stethoscope more than anything else, and performed essentially the same function. Plugging it into an instrument receptacle on his suit, he put the business end up against the tube.

Nothing. Whatever functions the object was performing, it was performing them silently. There was no lub-dup of a beating heart, no gurgle of intestines processing food, no rushing of air into lungs. Nothing snapped, crackled or popped. *It doesn't eat Rice Krispies*, he thought with a lopsided grin.

He put away the stethoscope and brought out a wide-band, short range radio receiver and plugged it in. Again, nothing. It wasn't emitting any radio waves. He sighed and put the receiver away as well.

A half-hour later he put the last of his instruments away and shook his head. *This is just poking and prodding*, he thought sourly. He recalled once picking up a guitar and playing around with it, not having the slightest idea as to how to make even the simplest chord. Then the owner happened by, took it from him and banged out a tune. *How can I learn to bang out a tune here?* He shook his head again, then sighed and stepped back.

As he stepped back he ran into something. Snarling a curse, he whirled around, a rather difficult feat in an environmental suit.

"Hey, whoa!"

The voice in his suit speakers was Elsa Winger. Startled, he stabbed the transmit activator with his tongue. "What the deuce do you think you're doing? You scared the crap out of me, sneaking up like that!"

"Sorry," came her reply. "You looked busy so I didn't want to bother you."

"That's okay," he grouched. "I guess I'm not really busy any more."

They turned and walked slowly toward the shelter. "Not getting anywhere?" she asked.

He shook his head, then realized that she couldn't see inside his helmet from the side. "No." He paused. "I don't know," he went on. "Why am I even wasting my time doing this?"

"Last night it sounded like you had a good point," Elsa replied.

Tailer stopped walking and turned to face her. "Yeah," he retorted. "And last night I also hadn't thought much about what it might entail to try and communicate with this thing."

She stopped too. "And now you're finding out."

He nodded. "Yeah. I got to thinking about it last night. Look, Elsie..."

"I really wish you wouldn't call me that," she interrupted in irritation..

He stopped. "You never seemed to mind before."

"That's because you weren't paying attention," she shot back.

Okay, maybe not, he thought sourly. *First Alicia, now her. Why is it that women are so hard to understand?* Aloud, "Okay, sorry. But what's the big deal?"

"It makes me feel like a cow."

"A cow?"

"Yeah. Elsie the Borden Cow. Ever heard of her?"

"Nope."

“It used to be a dairy company back on Earth. Went belly-up a long time ago. But one of the Founding Fathers of Armstrong was a dairy farmer and wanted to start a business, so he resurrected the name. And the cow.”

“Oh.” Tailer felt chagrined and foolish.

“Anyway, you were saying you got to thinking last night...”

“Yeah,” he said. He hesitated, then continued. “The problem is that we don’t even know where to begin! Remember all the trouble we had with the Phasni’e? Well, this is a thousand times worse. At least we were able to figure out pretty quick that they were intelligent. That at least gave us a start,” he finished sourly.

After a moment Elsa replied. “So what you said last night—:”

He shook his head again. “I don’t know. Maybe I just didn’t want Wymer cutting into it.”

“Why not?”

“I don’t know!” he snapped in exasperation. “Look, I know it doesn’t make sense. I don’t normally get so obsessed about things. Right now, to be perfectly honest I’m not sure I even care any more. Let him chop it to ribbons if he wants. No, I don’t mean that. I guess I still don’t want him cutting it open.”

“So what are you going to do now?”

He shrugged. “I don’t know. Probably nothing. There’s nothing else I *can* do, for crying out loud.”

“So you’re going to let Wymer cut into it?”

He sighed. “I don’t think I’ve got any choice.”

Elsa paused for a moment. “Look, Dick, it probably won’t matter. Personally, I think it probably is alive. But it’s not anything we can understand. It’s not an animal or a plant. It’s something new.”

“So does that give us the right to cut into it?”

“Who’s here to object?”

He pointed a finger at the object. “*It’s* here. *It* might object.”

“So far, it hasn’t given us any reason to think it even knows we’re here. Or that it even knows anything, period.” She put her hands on her hips, as if defying him to contradict her.

Tailer drew a breath. “Okay,” he conceded. “I give up.”

At that, Elsa softened a bit. “Look, Dick, I know it would have meant something to you. Maybe that’s your problem. You’re trying to make up for all those dead planets we’ve been finding.”

“Could be,” he acknowledged grumpily. Why did she have to play psychiatrist with him?

“Anyway, for what it’s worth, here’s a suggestion. When Wymer cuts it open tomorrow, why not stick a signal generator or something directly inside it? Maybe you’ve got to make direct contact.”

“Oh, come on!”

Elsa turned back toward the shelter. “At least think about it,” she said.

He hurried after her.

* * * * *

Benson Wymer was an early riser. Even before Tailer had gotten up, taken a needle shower, and wolfed down another freeze-dried, reconstituted breakfast, Wymer was already outside setting up his equipment. Tailer had to hurry in order not to miss anything.

Elsa was probably right; he thought to himself. It was probably some new kind of life that was neither plant nor animal. Even the idea of thought or intelligence was probably totally irrelevant. He briefly considered her suggestion of plugging a signal generator directly into it, then tossed it from his mind. On the other hand, if there was something to Dave’s idea about it being an alien factory, that might imply some sort of central processing and control. He

resurrected the signal generator idea again, then chuckled at the thought of standing in front of a computerized forklift back on Earth and reciting prime numbers.

As he had told Elsa yesterday, he simply no longer cared.

Nevertheless, he still didn't like the idea of cutting into it.

His feelings on the matter were finally sorting themselves out. It really had nothing to do with intelligence or with any other qualitative feature of the object. Rather, it was simply the fact that *it didn't belong to them*. He imagined some unknown aliens from the galactic core showing up on Earth and ripping apart cars, houses and everything else they could find just to figure out how they worked. So what if this thing was an alien factory? Tailer was pretty sure that whoever built it would probably object strenuously to humans cutting up their property.

And if it was a life form, then the original moral questions remained. Especially since they really didn't know what they were dealing with.

The entire complement from the two shuttles was already gathered next to the nearest of the reddish yellow tubes. Benson Wymer was standing in the middle of a semicircle, with Dave Kacharin facing him. A portable table had been set up between them. As Tailer approached the semicircle spread slightly to let him in.

Wymer glanced his way. "So the prodigal has decided to join us. Glad you could make it, Dick."

Tailer nodded but said nothing. After a moment, Wymer turned his attention back to the table and picked up a hypersonic scanner.

"First thing," he announced, "is to see what we can see without cutting into it. This should make Dick happy," he added sarcastically. Holding the instrument in both hands, he moved it back and forth, watching a portable screen in front of him on the table. After a few minutes he put it down.

"It looks like we've got some kind of exoskeleton," he said. He pointed to a raised, slightly rough spot. "It's thickest here,"—his hand moved to indicate another spot—"and here. The rest is much softer." He glanced up at Tailer and grinned slightly. "We'll make our incision starting here,"—his finger pointed to a spot just below the original rough area, then traced a forty-five degree line leftward and down—"and ending up here. But first, I'd like to draw a sample of whatever is inside. A biopsy, if you like." He picked up what was in essence an enormous hypodermic needle attached to a rubber tube and a chemical analyzer.

He handed Dave the analyzer. "Here," he said, "this is your job. You're the biologist. You can tell us what it's made of." He grinned again. "And I doubt it will be sugar and spice or puppy dog tails." Kacharin took the needle, held it up, pointed it at the surface, and plunged it in with a slow but firm motion.

He had barely inserted it to half its length when the attached tube suddenly stiffened with pressure. Startled, he jerked his hand back, yanking the needle out. Instantly, a jet of dark yellow, oily liquid sprayed forth, striking him in the chest and covering his suit in sticky goo. Both men hastily backed off. The spray diminished to a trickle, then stopped.

"Well, it obviously has some sort of blood—" began Wymer. He stopped abruptly as Dave Kacharin let out a sudden yell.

"It's eating my suit up!" Kacharin shouted. He turned and pushed his way past the assembled crowd, desperately trying to get to the shelter. Tailer caught a brief glimpse of the front of Dave's suit as he shouldered by; it was fizzing like a soft drink on hot metal.

One of the pilots ran over to the airlock and began cycling it. For a moment, as the hatch yawned open, Tailer thought Dave was going to make it. Then he stumbled and fell to his knees, letting out a horrible, rasping scream, then rolled over onto his side. A few hacking coughs, accompanied by odd hisses and pops, then the suit legs stopped twitching.

By the time Tailer reached Dave, he was dead. He stared in shock at his body, then back to the enigmatic, uncaring object, still sitting there as if nothing had happened.

* * * * *

Tailer floated into the starship's Biosciences laboratory shortly after nine hundred hours. He really had no purpose in coming—he often did so when he needed time just to be alone and think. This morning the mess cook had served real waffles with real maple syrup—a treat from Earth stored away for special occasions—but it could have been cardboard disks with machine oil for all Tailer noticed. Special occasion? A colleague had died; his body stuffed in the ship's mortuary freezer. Naming their enigmatic find after him was small compensation. Absently, he drifted over to the rack containing terrestrial life form specimens.

It was nearly three days since the last shuttle had blasted off from the temporary base near the object. Everyone was gone now, and the planet abandoned once more to whatever it was that sat unmoving, unheeding on its murky surface.

And their questions remained unanswered.

Because of Dave Kacharin's death, their find, along with the entire world, had been designated Category H, to be assigned to a Special Research and Exploration Team. The SRET units were essentially the scientific community's answer to the army's Special Forces; a group of men and women specially trained to deal with hostile situations and at the same time extract meaningful information. Tailer would have loved to be a part of the team assigned here, but the grueling training required two years, and not everyone who applied succeeded. *Just my luck*, he grumbled to himself, *Alicia will apply and make it*.

Maybe someone would find the answers to their questions.

Maybe even Alicia.

Tailer no longer cared.

He noted that one of the specimen holders was slightly ajar. It was the one containing fruit flies. *I must remind Elsa to be more careful*, he thought as he reached over to close it. As he did he accidentally flipped it completely open for a moment and two flies came out. *Really*, he added in his mind as he closed it, *I should be more careful myself*.

Maybe there are some things simply not meant for human beings to understand, he mused. He thought back to his tossings and turnings of a few nights ago, and again considered the idea of communication. *Maybe the question is even more basic*, he thought.

How does one define "intelligence"?

One of the flies buzzed around near his head, trying to orient itself in the zero-gravity environment of the ship. Tailer ignored it.

There were things about the mind of a human that were completely incomprehensible to a Phasni. Similarly, there were things about the Phasni mind that humans would never understand. Yet both were intelligent.

Maybe this thing was intelligent. Maybe it had an intelligence so completely alien that communication would never be possible.

And maybe it was just what most of his colleagues had said all along, a blind, dumb plant-like object with no more intelligence than one of these flies buzzing around the room.

If that was the case, then what difference did it really make? He sighed and turned to go.

The fly lighted on Tailer's left arm and sat there rubbing its forelegs together. Annoyed, he swatted it. Then he turned and drifted out of the room and back to work.