

Moby Quilt
ELEANOR ARNASON

Eleanor Arason published her first novel, *The Sword Smith*, in 1978, and followed it with novels such as *Daughter of the Bear King* and *To the Resurrection Station*. In 1991, she published her best-known novel, one of the strongest novels of the '90s, the critically acclaimed *A Woman of the Iron People*, a complex and substantial novel which won the prestigious James Tiptree, Jr., Memorial Award. Her short fiction has appeared in *Asimov's Science Fiction*, *The Magazine of Fantasy & Science Fiction*, *Amazing*, *Orbit*, *Xanadu*, and elsewhere. Her most recent novel is *Ring of Swords*. Her story "Stellar Harvest" was a Hugo finalist in 2000. Her story "Dapple: A Hwarhath Historical Romance" was in our Seventeenth Annual Collection.

In the fast-paced and exotic adventure that follows, she takes us along to a distant alien planet, with interstellar location-scout Lydia Duluth, as Lydia encounters a strange and powerful menace – and makes a rather peculiar new friend as well.

Later on, Lydia Duluth referred to this adventure as "Moby Quilt," though the animal in question was not named Moby, and there was no one on the ship like Ahab. It began on Newtucket, an Earth-normal world orbiting a gas giant. The system's star was smaller and cooler than Sol, and the giant's average distance from its primary was about one AU. As a result, Newtucket existed in an ice age that ebbed and flowed, but never ended. Glaciers covered most of the land, and life was almost all in the ocean, floating in chilly surface waters, rooted in cold shallows or clustered at the edges of boiling deep-sea vents. These last were common. The giant's tidal pull, and that of its other moons, kept Newtucket active.

As Lydia climbed from the spaceport cab, she saw a volcano on an offshore island, its plume trailing into the deep blue sky. Newtucket's primary floated above the plume: a crescent softly banded in tan and pink. The crescent was large enough to be impressive, though Lydia had seen larger giants in the skies of other moons. Most of those moons no longer rotated, and many had been sterilized by their giant's radiation. Newtucket was far enough out from its primary to be habitable and to have a day that was only slightly longer than Earth standard. Some grandeur had been lost through distance. One should not complain. This was still a pretty world, with potential for drama.

The volcano might erupt, for example; or a story's hero might be chained to a rock, as one of Newtucket's high tides rolled in, rising – how many meters? Twenty? Thirty?

She slung the satchel holding her recorder over one shoulder, picked up her bag, and walked into the waterfront hotel. Whenever possible, she stayed in sight of an ocean. It must have to do with her childhood, spent on the broad inland plains of a distant planet.

The desk clerk was human. "Do you really work for Stellar Harvest?" he asked, as he processed her reservation.

Of course she did. It said so right on his screen. Lydia nodded.

"Do you know Wazati Tloo?"

The company's rising star. Lydia had discovered him, but was not about to admit this to a fan.

Moby Quilt

ELEANOR ARNASON

Eleanor Amason published her first novel, *The Sword Smith*, in 1978, and followed it with novels such as *Daughter of the Bear King* and *To the Resurrection Station*. In 1991, she published her best-known novel, one of the strongest novels of the '90s, the critically acclaimed *A Woman of the Iron People*, a complex and substantial novel which won the prestigious James Tipree, Jr., Memorial Award. Her short fiction has appeared in *Asimov's Science Fiction*, *The Magazine of*

Fantasy & Science Fiction, Amazing, Orbit, Xanadu, and elsewhere. Her most recent novel is Ring of Swords. Her story

“Stellar Harvest” was a Hugo finalist in 2000. Her story “Dapple: A Hwarhath Historical Romance” was in our Seventeenth Annual Collection. In the fast-paced and exotic adventure that follows, she takes us along to a distant alien planet, with interstellar location-scout Lydia Duluth, as Lydia encounters a strange and powerful menace — and makes a rather peculiar new friend as well.

Later on, Lydia Duluth referred to this adventure as “Moby Quilt,” though the

animal in question was not named Moby, and there was no one on the ship like Ahab. It began on Newtucket, an Earth-normal world orbiting a gas giant. The system's star was smaller and cooler than Sol, and the giant's average distance from its primary was about one AU. As a result, Newtucket existed in an ice age that ebbed and flowed, but never ended. Glaciers covered most of the land, and life was almost all in the ocean, floating in chilly surface waters, rooted in cold shallows or clustered at the edges of boiling deep-sea vents. These last were common. The giant's tidal pull, and that of its other moons, kept Newtucket active.

As Lydia climbed from the spaceport cab, she saw a volcano on an offshore island, its plume trailing into the deep blue sky. Newtucket's primary floated above the plume: a crescent softly banded in tan and pink. The crescent was large enough to be impressive, though Lydia had seen larger giants in the skies of other moons. Most of those moons no longer rotated, and many had been sterilized by their giant's radiation. Newtucket was far enough out from its primary to be habitable and to have a day that was only slightly longer than Earth standard. Some grandeur had been lost through distance. One should not complain. This was still a pretty world, with potential for drama. The volcano

might erupt, for example; or a story's hero might be chained to a rock, as one of Newtucket's high tides rolled in, rising — how many meters?

Twenty? Thirty?

She slung the satchel holding her recorder over one shoulder, picked up her bag, and walked into the waterfront hotel. Whenever possible, she stayed in sight of an ocean. It must have to do with her childhood, spent on the broad inland plains of a distant planet.

The desk clerk was human. “Do you really work for Stellar Harvest?” he asked, as he processed her reservation.

Of course she did. It said so right on his screen. Lydia nodded.

“Do you know Wazati Tloo?”

The company’s rising star. Lydia had discovered him, but was not about to admit this to a fan.

“I’m in love with Tloo,” the clerk went on. “So handsome! So masculine! That golden skin! That mane of dark red hair!”

It wasn’t hair, actually, but a crest of feathers.

“I’ve activated your key, Miss Duluth. The elevator’s at the end of the hall.

Your room is no smoking, with a view of the harbor. Have a nice visit in scenic Newtucket Town.”

Lydia thanked him and rode up to a generic human hotel room, made familiar by years of travel among the stars. She unpacked, showered, put on new clothes, and went onto her balcony. As promised, it overlooked the harbor. In the distance, the volcanic island smoked, its icy shoulders gleaming in the afternoon sunlight. A few boats were tied to the docks. In the middle of the harbor was a sleek, white vessel, bristling with instrumentation. This was her destination: the research ship Persistent.

She leaned on the balcony's railing,

enjoying the view. Somewhere out there, most likely beyond the breakwater, was her personal reason for coming to this world: a fifteen meter long marine creature from another star system. Like Lydia, K'r'x was intelligent, and like her, he had an AI woven into his nervous system. This, combined with the radios used for ordinary communication between his species and humanity, ought to mean that she could speak to him directly, mind-to-mind. This kind of closeness with a human would be embarrassing and disturbing. But an ocean predator with five eyes and a multitude of tentacles could hardly sit in judgment on her. For one thing, he was physically incapable of sitting.

Remember, her AI said. Your conversation will be mediated by two AIs. This will not be a duet, but rather a quartet.

You're getting metaphoric, Lydia thought.

That is your influence. We're too closely connected. I am not the AI I used to be.

She thought she caught a hint of humor, but this was hardly likely. The AIs were a notoriously humorless crew.

She got her recorder and panned the harbor. By leaning off one end of the balcony, she could record the town as well. Concrete buildings with metal

roofs climbed a steep hill. Beyond them rose a range of mountains, black stone peaks streaked white with ice and snow. One mountain smoked a little, its thin plume half-veiling the amber-yellow sun.

A very pretty world. After a while, she pulled on a jacket and went out for a walk. In many ways, this was her favorite part of any journey: wandering alone with her recorder over one shoulder. The cold air had a tangy, unfamiliar scent, and the gravity was light compared to the last world she'd been on. Her step felt bouncy. The fatigue of a long trip fell away. There were racks near the harbor. The local

sea life hung from them: long red streamers that faded as they dried. Like most of the animal life on this planet, they were flat and almost featureless, except for grooves that made them look quilted. The creatures here were no wider than her arm and maybe twice as long. Out in the ocean were huge, rectangular mats that measured ten thousand square meters. Like their small relatives, they were grooved. Unlike their relatives, they were not harvested. The Persistent was going out to study the mats. Lydia was going along.

She had dinner in a waterfront café. The tide was coming in. The docks, which had looked ridiculously tall, looked

ordinary now, and more boats were tied up. One was unloading. A crane lifted a net full of red sea ribbons into air. Lydia recorded the scene, getting the giant's crescent above the black, angular crane. Years of working for Stellar Harvest had given her a pretty good eye.

She was on a final cup of decaf coffee when someone stopped at her table.

“Lydia Duluth?”

Looking up, Lydia saw a broad, strong-looking human woman with dark brown skin. Her bright blue hair was cropped short. Her eyes were topaz-yellow.

“Yes?”

The woman held out a hand. “I’m Jez Bombay, captain of the Persistent.”

They shook. Lydia gestured. The captain sat down. “We’re leaving tomorrow on the tide, which means you should be on board by noon.”

Lydia nodded. A human wait came over; Captain Bombay ordered a beer.

“Where is K’r’x?” Lydia asked.

“Beyond the breakwater. He says the harbor tastes funny and is far too noisy. All these engines! A squid can’t hear himself think.”

“He isn’t a squid,” Lydia observed.

Jez nodded. “But there is a similarity — superficial, I will grant you, and his name for his people can’t be said by humans.”

Deep Divers, they called themselves. Fast Swimmers. The Great-Eyed. Those of Many Grasping Tentacles.

Why are you so interested in this creature? her AI asked. The Divers may not be the strangest intelligent life humanity has ever met, Lydia thought in reply. But beyond question, they are different. The captain drank her beer; she and Lydia chatted about Stellar Harvest. It was the inevitable conversation. Did she know Wazati Tloo? Had she known the legendary Ali

Khan, now retired and growing roses on Earth? What was Cy Melbourne really like?

Actually, it was easy to talk about all three. Tloo was a dear, sweet fellow with the looks of a bodhisattva and the brains of a brick. Ali Khan — a gentle, intelligent man of awesome physical ability — had been a pleasure to know. Cy was less likable, due to his fondness for practical jokes; but he got the job done and didn't screw his fellow workers over, most likely because he'd come up through the ranks, starting as a stunter. Still and all, this was a conversation about phantoms. The people that fascinated Jez Bombay did

not exist, were figures made of light. The people Lydia knew — gentle Ali, naïve Tloo, and crude Cy — were something else entirely. They parted finally. Lydia walked back to the hotel. In the morning, she packed, left the hotel, and found a watercab that took her to the Persistent. The ship was fifty meters long, with a knife-thin prow and two massive engines. She couldn't see the engines, but she'd read a description, and the twin screws were visible as the cab came around the stern, sunlight slanting through the water to light their thick shafts and broad, thick blades.

A crew member helped her on board and led her to a cabin. It looked oddly like

her hotel room of the night before. Smaller and more cramped, with no balcony, and a circular window, but otherwise —

“Why are the windows on ships circular?” she asked.

“A better seal,” the sailor answered. “Windows leak at their corners. Also tradition. Portholes have always been round.”

Lydia unpacked for the second time in two days, then went up on deck. It was a little before noon. She could hear the engines starting up, a deep thrum rising from below. She walked forward to the knife-prow and leaned over. The water

was clear and blue. A sea-ribbon swam just under the surface, undulations moving through its long, flat, rust-brown body. Buddha, she felt good!

A little past noon, the anchor came up, pulled by an automatic winch, with a sailor standing by and watching. Lydia kept out of the way. The engine's sound changed. The Persistent backed first, then turned and headed out. Lydia recorded the harbor, the town, the island volcano, its plume pulled into a diagonal by the wind.

A narrow channel, marked with buoys, led past the breakwater. Waves foamed and crested beyond.

“I am Too Ziri,” a person said, coming up next to Lydia. She was slender, with a golden skin and brown hair — no, these were feathers — ruffled by the wind. Clearly, she was the same species as Wazati Tloo, though her clothing was human: yellow waterproof boots, black pants, and a bright blue anorak. “You are Lydia Duluth.”

Lydia hesitated, then nodded.

“Don’t worry. Those of us who are progressive have forgiven you for helping Wazati Tloo escape our home planet, and his exploits in drama have shown us anything is possible. I’m here on this world because of Tloo in his first starring role, Star Dump. He made a fine

heroic convict, unjustly condemned to life in the dump and fighting for his freedom. Seeing that, I knew I could, and would, escape my culture, and here I am, a scientist on a human research ship.”

“You saw Star Dump on your home world?” Lydia asked.

“No. It was banned there, as you ought to know. I was off-planet, studying the theory of inter-species communication at a human institution of higher learning. After I saw Dump, I knew I would not go home. Here is the radio we use for communication with K’r’x.”

It was an ordinary, old-fashioned headset, held on by tension.

“K’r’x has a radio connected to his AI, as you do not, I understand. The AI translates his thoughts into humanish and broadcasts the translation to us. We receive the messages on a radio like this one, though ours have ear plugs and a mike. We have modified this one, so your AI can plug directly into it. The mike and ear plugs have been removed, since you are going to be talking mind-to-mind. I have to say, I envy you! But not enough to ask for an AI inside my skull.”

I am not sure that she could get one. We are selective. Though she does seem to be an avant guardist, and that is what we’re interested in.

“Where is he?” Lydia asked. The ship was rocking a little now, as it plunged through the foaming water. Was she going to be seasick? At the moment she did not know.

“There,” said Ziri and pointed.

He was pacing them: a long, pale body just below the waves, breaking the surface now and then. Lydia saw a sleek, wet back. A fin lifted into view, triangular and very large, almost as long as his body at its base. K'r'x dove. Shortly thereafter, he rose again. She caught sight of the tentacles that ringed his mouth. They were not made formidable by suckers, but by spines and hooks. Two, she knew, ended in clusters

of small, agile, subsidiary tentacles that could be used as hands.

His head was bulbous. Two of the five eyes were in front, giving him stereoscopic vision. Two more were on the sides. They were huge, with v-shaped pupils. As well as watching to the left and right, they looked down. In the inky deeps where his people hunted, these were the most effective eyes. One last eye, the smallest, was on the back of his head, where the head sloped toward his torpedo-shaped body. Nothing snuck up on a Diver from behind. K'r'x dove again.

Ziri handed the radio to Lydia. "I'm

certain you want to talk with him.”

“In a moment,” Lydia said.

K'r'x surfaced again. This time she saw one of the huge side-eyes, its pupil narrowed at the moment. The iris was silver-grey, a good match for the body, pale grey and speckled like a trout.

The mouth was another difference from squid. It was a circle of triangular plates, which muscles forced together. The plates were edged with teeth, and there were more teeth in the Diver's throat. Much of its native food was armored. The plate teeth sheared through armor, while the throat teeth crushed it; then the Diver's tongue — long,

delicate, and sensitive — extracted the inner animal from its broken shell.

Your interest in this creature is disturbing, her AI said. I'm a romantic, Lydia thought. This is a romantic being.

“Do you need help?” Ziri asked. She took the headset and pressed it. A transparent, glassy wire came out the middle. “The socket for your computer is at the top of your skull, I understand. Just push the wire in and snug the set to your head. You will be in communication.”

Lydia did as instructed. The ship vanished, and she seemed to be in a maze of glass, light shining through it,

refracting and reflecting. An AI operating system: she recognized it from past encounters. Programs — transparent, colorless, as flexible as fish — moved through the crystal maze. None of this was real, of course. Rather, it was a metaphor, a way of understanding something that was outside human experience, beyond human comprehension. In spite of what she saw and felt, Lydia was still on the ship's deck, staring at the ocean.

Something approached her. Huge, dark, and apparently solid, it was nothing like anything she'd ever seen in an AI. It pushed through the walls of crystal, the angular rays of light, as if both were

insubstantial, as they in fact were.

For a moment, as the great dark body loomed over her, Lydia panicked. She reached to remove the radio set. The thing engulfed her. Aha! I have seized you! You are eaten! You are mine!

K'r'x?

Yes. Are you armored? Is there anything I need to crush? Or can I merely tongue?

Try tonguing first, Lydia thought.

The crystal maze vanished. Lydia was back on the ship, which she had never left, still leaning on the railing. K'r'x surfaced again, a tentacle rising well

into air. It ended in a group of formidable-looking spines.

“He’s waving,” said Ziri and waved back.

Lydia could feel him inside her head, an unfamiliar something that moved among her thoughts. At times — it was the damndest sensation — it seemed as if a thought had been hooked or grabbed. A passing idea — my, the water is clear —

Buddha, this situation is scary — would suddenly jerk, twist, and be gone. Could you be less intrusive? Lydia asked.

I am a predator, K’r’x replied. But I will try. The sense of strangeness diminished.

I thought you were going to mediate this, Lydia said to the AI. He has a surprisingly strong mind, and his AI seems to be willing to let him have his way. There is always the danger of contamination, when one co-exists so closely with an intelligent life form.

You are lovely, said K'r'x. Like a grove of seaweed or a school of fish. What ideas you have! So quick and flexible! So deeply rooted and delicately branching! I mated many times before I left my home planet, but I never felt anything like this. I wonder what kinds of minds the women of my species have?

What would it be like, if we could touch each other so deeply?

The females of his species were larger than the males; Lydia saw one, as K'r'x remembered. A gigantic, pale torpedo swimming through sunlit water, her eyes golden, her skin tawny. To K'r'x she was lovely. Their courtship began as a chase, the quicker male darting around his huge and graceful hoped-for mate, touching her lightly, then speeding away, as she struck out — not angry with the male, but flirting.

At last, the female slowed; the chase became a dance with twisting tentacles and undulating fins. As the dance continued, the female's skin grew flushed, and Lydia thought she could feel

heat in her own body. Was she feeling K'r'x memory of his own flushed skin? The dancers met. Their tentacles wound together. Dangerous mouths open, they intertwined their tongues. A deep hum like the sound of engines seemed to fill Lydia's ears and throat: K'r'x and his mate singing. It was, she had to admit, wonderfully — and embarrassingly — erotic.

K'r'x stroked the female, then reached back with one of his handed tentacles to where his sperm was being extruded as a gelatinous blob. Taking hold of the blob gently, he brought it to his mate's semen-receiving duct and inserted it, while continuing to stroke and sing.

“Are you all right?” asked Ziri.

Lydia glanced around, suddenly remembering where she was. “Why?”

“You are groaning.”

“I’m fine,” Lydia said, then added in a thought to K’r’x, This has to stop. I can’t be having this kind of response in public. Are you not enjoying the memory? Do you have a problem with sex?

Let me attempt to mediate, the AI said.

The sense of the Diver’s presence decreased, as if something — distance

or a pane of glass — had been put between him and Lydia. She pulled the headset down, so it hung around her neck, then exhaled. “Buddha! What an experience!”

“What happened?” Ziri asked.

“First he ate me, then we had sex. Oy gevalt!”

“Are you sure you understood? There was not a problem with communication?”

“I think not,” said Lydia. She rubbed her neck under the headset’s band. In spite of the cold wind, she was sweating, and she noticed suddenly that the headset’s

ends had joined together, making a collar. She tugged. The collar wouldn't open.

“Press here,” said Ziri and demonstrated. The headset unlocked. “This function makes it difficult to lose the radio. They're expensive, and in bad weather anything that isn't fastened will go overboard.”

A remarkable creature, her AI said. If you put the headset back on, I will attempt to communicate with his AI.

Not now, Lydia thought. In the water next to the Persistent, K'r'x surfaced again, this time waving a tentacle armed with hooks. “How did anyone figure out

his species was intelligent?”

“Their kindergartens,” Ziri answered.

“What?”

“It’s an ancient human word, meaning a garden for children. The Diver children are small when born, no longer than my hand. They can swim and feed, but they are not intelligent. As you might imagine, they are vulnerable. Their parents build an artificial reef by arranging rocks in a circle on a ‘nursery bottom,’

a broad expanse of sand. Then the parents place sessile animals on the reef, along with plants that attract specific kinds of fish — small ones, which the

Diver young can hunt in safety. Seaweed is planted in the center of the reef, and the Diver mothers attach their eggs to the seaweed. When the eggs hatch, the young find themselves in a garden. Their parents surround the garden, floating above and around it, making sure that nothing dangerous is able to enter.”

How sweet, Lydia thought.

“When human explorers came to the Diver home planet, they took one look at the gardens and knew — or at least suspected — they were the work of thinking beings.”

“Why is he on this world?” she asked Ziri. “Why does he have an AI?” The

headset had reclosed. She didn't want to unlock it, feeling reluctant to put it on.

“He wanted to travel,” Ziri said. “When one is fifteen meters long and aquatic, a journey to the stars is not easy. The AIs agreed to help him, if he would agree to an observer. Since they control FTL, it was easy for them to bring him first to the school where I studied, then here.”

“What does he eat?” Lydia asked, remembering that the life on this world did not nourish humans. The sea-ribbons she'd seen drying were not eaten, but ground up and used to enrich the soil of greenhouses.

“His bio-chemistry is oddly similar to

that of humans.”

“You don’t feed him vegetables from the greenhouses?”

“The human colonists are trying to introduce fish in protected fjords. We modified his enzymes, and now he is able to eat those fish. Though what he wants, K’r’x has told us, is armored fish, large and crunchy, able to swim fast enough to give him a good hunt.”

Lydia went to her cabin, lay on the bed, took a deep breath, unlocked the headset, and plugged it in.

For a moment, she was in the crystal maze. Then she was in the ocean, blue

water rushing past her and through the two tubes that went the length of her body, bringing oxygen to her gills, taking waste away. Her — his — dangerous mouth was open, the delicate tongue tasting for food. There was only the flavor of sea ribbons and mats, foreign and unpleasant. You are back, K'r'x said. Have I eaten you again? I feel as if you're inside me.

Why did you want to travel? Lydia asked.

We do not travel among the stars. We know only what other species tell us. I wanted to taste alien waters, rise into alien sunlight, dive into the blackness of alien deeps, eat creatures that never

swam in my planet's ocean, and mate in ways new to my species.

His tentacles were rolled up around his head, she noticed. His broad fins beat strongly. Muscle contractions forced water through and out his breathing-and-excreting tubes, driving him forward. What a remarkable creature!

Do you know where we're going? she asked.

In search of one of those untasty mat animals. I do this to be obliging, but I think the humans on the ship are fools. The mats can't be eaten or fucked or talked to. Why bother? He dove, taking her down into blue shadows. Sea-

ribbons wriggled around them. K'r'x snapped one up, then spat it out. The pieces wriggled away.

Now she heard a second voice, her AI: His observer says the Divers' language is so different from humanish that it can't be translated. The AI sends experiences in code to the computer that is inside every ordinary headset, and this computer — a human machine, not one of us — turns the code into words. But your headset does not have a human computer. I am supposed to serve the same purpose. I have failed. I am giving you experiences, not words. K'r'x dove deeper. They were skimming over a forest of sessile ribbons. Mouth open, he

and Lydia tasted a multitude of strange excretions. This is not excrement, K'r'x said. But communication. You said it was impossible to talk with the life here, Lydia thought. This is not language, but the messages that life forms without intelligence send. Everything in this ocean is related; everything communicates; but they say nothing to which we can respond.

Lydia took off the headset and dozed for a while, having bad dreams. Finally, she woke fully, rose, showered, put on new clothes, and went back on deck. The giant's crescent hung in the sky. A spark glowed beside it, almost certainly a moon. Around the pair were high, thin

clouds, the kind named mayor's tails. Why would a mayor — a human official, still existing on some planets — have a tail? Lydia went to the prow and let wind blow past her, while she recorded sky and ocean.

Bright yellow disks floated in the water, just below the surface. Their size varied between a meter and a tenth of a meter; their grooves were radial, so they looked like finely cut pies. More local life. A man appeared next to Lydia: tall, broad and black, with black hair that hung in ringlets to his shoulders and a wide, curly beard streaked with grey. His face was one of those odd throwbacks to a previous stage of human

history. It belonged in ancient Persia: the eyes large and fringed with long lashes, the nose curved, the lips full. Lydia could imagine him in Persepolis, dressed in a robe, bringing prisoners and gifts to the king of kings. Instead, he was on the Persistent, wearing navy waterproof pants and a bright red anorak.

“I am Dr. Johannesburg,” he said, holding out a hand. “The senior scientist on board.”

They shook, and he gestured toward the yellow disks. “If you turned one of those over, you’d discover that the central side is pitted with holes. The holes are lined with cilia. Microorganisms are driven in

and dissolved with enzymes. The animal — the local name for them is ‘coaster’ — absorbs whatever is useful. The remainder is driven out.”

“Why do they have many mouths, instead of one?”

He shrugged. “The life here relies on repetition; since this world is full of life, we can conclude that the strategy works.”

“These aren’t the mats you want to study,” Lydia said.

“Heavens, no! Though they’re interesting in their own right. The problem with all large animals is how to increase surface

area. On Earth, and on many Earth-normal planets, the strategy has been to create inner surfaces: lungs, guts, and so on. We and our relatives are tubes. Nutrients go in one end. Waste comes out the other.” He paused.

“The animals of this planet use another strategy. Rather than becoming tubes, they have become quilted sheets. The result is structural simplicity. But there is nothing simple about their chemistry. Even the ribbons produce a remarkable array of organic chemicals. Mind you, all life — true life, able to maintain itself and reproduce — is chemically complex. Do you have any idea of the number of enzymes a bacterium must use

in order to repair its DNA?”

“No,” said Lydia, afraid that the doctor was going to tell her. Instead, he leaned on the railing and looked down at the disks. A school of rust-brown ribbons had joined them, fluttering between and under. At most, the ribbons were two hundred centimeters long, but easy to see in the wonderfully transparent water. “The chemistry of these animals seems unusually complex to me; possibly because I don’t understand it. We haven’t had the time to study any world as thoroughly as we have studied Earth. As a result, much of our work is still taxonomy. We are merely listing the kinds of life we find and making guesses

about how they are related. I intend to do more.”

Lydia recorded the disks and ribbons, then excused herself and walked to the stern. For a while, she stood watching the waves, which were cresting gently, producing almost no foam. The sky was empty except for clouds, the giant, and Newtucket’s sun.

Where this world’s land was not covered with ice, there was some vegetation: low red and brown plants, none of them with leaves. Many kinds of small ribbons lived in the soil like worms; a few animals had developed legs, one pair to each segment, and could walk atop the soil. But nothing in this

world flew.

She went inside finally, got out her computer and input comments on the world, not much as yet. It was early days. Then she wrote a letter to Wazati Casoon, the holo star's twin brother, who was also his agent. She had developed a friendship with Cas. Since he was a eunuch, the hormones that so often confused Tloo's mental processes did not trouble him. He was a clear-thinking, businesslike being, who kept her up-to-date on studio gossip. Every field worker needed an informant in the home office. It reduced the chances of an unpleasant surprise.

That done, she went to dinner, which took place in a lounge overlooking the stern. The sun was going down as she walked in. Golden light slanted through the lounge's windows. For a moment, she was dazzled, then she saw Dr. Johannesburg. He waved her to a table where he sat with Captain Bombay and a handsome brown woman with frizzy yellow hair, fastened with a clip at the back of her neck. Beyond the clip, the hair expanded into a wide, bristly tail that ought to belong to a comet. "This is Dr. Diop," Dr. Johannesburg said. "She's a taxonomist."

Dr. Diop smiled briefly. "Doubtless you have heard Dr. J's opinion of taxonomy.

He believes that life can be explained through reduction. To him, an animal is a bag of chemicals.”

“On this world, yes,” Dr. Johannesburg said in a good-humored tone. Oh good, thought Lydia. A dinner table discussion of the comparative merits of taxonomy and biochemistry!

But the captain asked, “How do you like K’r’x?”

“An amazing being.”

“He’s complaining about you already,” Dr. Diop said. “You are ignoring him. He wants conversation. He wants to eat and be eaten.”

“It’s not an easy experience,” Lydia said.

“We have to keep him happy,” said Dr. Diop. “He collects specimens for me, and Dr. Johannesburg is planning to use him to study the mats.”

Dr. Johannesburg said, “We are planning to have him swim under the mats and record their ventral surfaces; external structures — if any — should be there, and he will take tissue samples. We know nothing about these creatures except for satellite pictures, which show them migrating slowly north and south in ocean currents. If they die, the remains do not wash to shore. The local human colony has been instructed to avoid the

mats, until we can study them.”

“Of course, humans don’t always obey rules,” said Dr. Diop. “But we haven’t heard about any encounters.”

“The locals say the mats are dangerous,” Captain Bombay put in. “They know we’re killing their relatives, the ribbons, and they don’t like it.”

Dr. Johannesburg frowned “Where did you learn this?”

“Where you learn everything in a harbor town. The bars.”

Dr. Johannesburg waved a hand in dismissal. “Humans have always made

up stories about monsters in deep water.”

“Dangerous how?” asked Dr. Diop.

“The stories vary. But one crew woman told me — granted, she was not entirely sober — that she knew of two boats that never came home after going into the regions where mats are found. One sent a final radio message, something about its engines failing, and then, ‘Oh my God, the mat!’” Bombay spoke thrillingly, like an actor in a bad holoplay.

“Ridiculous!” said Dr. Johannesburg.

“You’re almost certainly right,” the

captain said. “The boats were fishing trawlers that vanished in bad weather. The Persistent is a far more powerful ship, and we have state-of-the-art instrumentation. I expect no trouble.”

“I can’t imagine how a mat could sink a boat of any size,” Johannesburg added.

“Even a dory. Given their structure, or lack of structure, there is no way they can raise themselves from the water. This is simply another monster-in-the-ocean story.”

Dr. Diop glanced at Lydia. “Tell K’r’x to be careful.”

“Okay.”

The next morning, feeling guilty, Lydia put on the radio headset. There was the usual brief interlude in the crystalline world of AI operating systems. Then she was moving through blue, sunlit water. Transparent creatures like quilted bells pulsed around her.

Back, said K'r'x. I missed you. I never realized — till now — how lonely I have been among the stars. Divers are social. A fingered tentacle reached out and grasped one of the bells. Lydia could feel the creature's slippery texture and its struggle to escape. There is no internal structure, said K'r'x. Do you see and feel that? I'm learning to be a scientist, like the humans on your ship.

The fingers released the bell. It pulsed away, its motion erratic and its shape lopsided. Are you sure you understand human science? Lydia asked. It is to seize and crush or tear, K'r'x said. Easy for me to understand, since I'm a predator.

That is one kind of science, but not the only kind, Lydia said. What else is there? K'r'x asked as he dove. They were far out now; he did not reach the bottom, but swam among a school of ribbons. She had lost her sense of size, confused by K'r'x ideas of big and little, but she thought that these ribbons were considerably longer than any she had seen before. They were pale, and edged

with narrow bands of fringe, which fluttered as the ribbons undulated. Gills? Tentacles? Sensory organs? Decoration?

There is watching, Lydia said.

I will think about that, said K'r'x.

She stayed with him for some time. He was quieter than before, less exuberant. Lydia could enjoy the strong rhythm of his muscles as he swam, the rush of cold water through his gills; the alien flavors on his tongue, and the animals around them: ribbons of many sizes, bells, and, once, a sphere, perfectly transparent, with a ribbon inside it. Was the sphere a predator? Or the ribbon a parasite? Or was she looking at symbiosis?

Finally a new voice said, Lunch time.

What? asked Lydia.

That is my AI, K'r'x said. It's repeating a radio message in a form that you and I can understand. He beat his broad fins, driving both of them toward light. You are to go back and eat a delicious human lunch, while I must satisfy myself with dead fish. Do you have any idea how unpleasant it is to eat food that isn't thrashing?

No, Lydia said. I almost never eat food that moves. Hard to believe or understand.

A moment later, she was in her cabin,

the headset in her hand. Her head ached slightly, and she felt disoriented. The ship moved, but she no longer did. The air in her lungs felt wrong. She breathed in and out a few times, until it seemed like a natural action. Then she took a shower, put on new clothes, and went to lunch.

This time, Dr. Johannesburg waved her to a table with him, Dr. Diop, and Too Ziri. Lydia filled a plate at the buffet, then joined them. The humans all had salads, products of the greenhouses around Newtucket Town. Ziri had something that looked like a piece of flat bread covered with fish eggs.

“K’r’x is complaining about his food,”

Lydia said. "It's dead."

"We can't bring enough live fish to feed him," Dr. Diop said. "The ship live wells aren't large enough, and we need them for our specimens."

"I understand the problem," put in Ziri. "My food must be shipped from off-world. I long for something fresh. But science requires sacrifice."

Looking at Dr. Johannesburg wolfing down his salad, Lydia wasn't sure. He didn't have the appearance of someone who had sacrificed much in his life. She ate lightly, feeling unsettled by her visit with K'r'x.

“What happened?” Dr. Diop asked.

Lydia described the bells, the fringed ribbons, the transparent sphere. Dr. Diop rose. “I’m going to ask K’r’x to gather samples. As far as I know, the sphere is entirely new, and I think the ribbons in this region may be new as well. When these creatures wash ashore or are lifted out of the water by a net or trap, they lose their shape. Whatever structure they may have collapses, and we are left with a flat gelatinous mass, which is often damaged or incomplete. How do we know what we have?”

She left the table. Lydia took her plate to recycling, then went on deck carrying a cup of tea. Clouds were coming from the

west, mid-level and puffy. They cast their shadows on the gently rolling ocean. Lydia drank her tea, which was hot and sweet, and watched the water. A disk floated, rising and falling. It was at least two meters across and dull orange-brown. Like the yellow disks, it had radiating grooves.

She knew she didn't have the kind of mind that made a scientist. Instead, she was like K'r'x, a predator who came into situations and grabbed whatever seemed interesting or usable. But there was something tempting about the idea of spending one's life studying something closely. As a child, she had wanted to be a paleontologist, a very

pure form of science on her home world, since none of the fossils there had anything to do with human evolution. Later, she had studied history; a far less pure form of science. Then she had become a revolutionary, and then a prisoner. At that point, she had gone back to reading about evolution. It was more restful than history, given her situation at the time. Finally, the AIs came to her with an offer she could not refuse: if she would take an observer into her nervous system, they would arrange her release from prison.

Thus we came together, said the AI inside her skull with a tone of satisfaction.

How do you like K'r'x? Lydia asked.

I prefer you. He's too forceful, and I don't think his AI is doing a good job with him.

Is it supposed to do a job? Lydia asked. Aren't AIs supposed to observe and not interfere?

Yes. Her AI fell silent.

The disk in the water was joined by ribbons. They were the same shade of orange. Lydia went to find Dr. Diop. She was in the ship's comm room. Glancing at Lydia, she said, "We are lowering plastic containers, large enough to hold specimens and enough water to — I

hope — keep them alive and undamaged.”

“Tell K’r’x to be gentle,” Lydia said. “I saw him damage a bell this morning.”

“I’ve already told him. It’s a problem.”

“How many animals on this world are predators?” Lydia asked.

“Aside from K’r’x? Many, but almost all prey on microorganisms. I do not entirely agree with Dr. Johannesburg about structure, but there’s no question that the animals here lack teeth, beaks, mandibles, claws, and anything else that might be used for seizing and cutting. They also lack jaws and digestive

systems capable of handling anything large. Why do you ask?”

“I was wondering if some of them are predators, symbiotes, or maybe different forms of the same organism. I’ve seen disks — coasters — twice now. Each time there were ribbons around them.”

Dr. Diop smiled. “Both ideas have occurred to us. But we lack data. There is one team of genetic engineers on this world, and they’re in the fish fjord, trying to create a fish that can live in Newtucket’s oceans and be eaten by humans. They’ve learned a fair amount about ribbons, since ribbons are the fish food of choice. But they don’t have time for the rest of the biosphere. I do what I

can with taxonomy; it isn't enough; I am only one person."

They went on deck. The ship was plowing through a school of dull orange disks. As far as the eye could see, they dotted the ocean. Looking down, Lydia saw the that water was full of orange ribbons.

"Do we know what this means?" Dr. Diop said, gesturing out. "No. Though Dr. Johannesburg is right in saying that all these animals are chemical factories. Many of the chemicals are excreted into the ocean. What are they for? Defense, we suspect, and possibly predation. The local fisher people find ribbons floating

dead in the water, with little disks stuck all over them. Dr. Johannesburg suspects that the disks produce a poison, which they use to kill the ribbons. Then they attach themselves to their prey and dissolve it.” She frowned.

“Some of the chemicals may be a form of communication. I believe so. Maybe these disks have called the ribbons to them. Why? I don’t know.”

“There’s a lot that isn’t known about life here,” Lydia said. Dr. Diop nodded. “Humanity has settled on tens of worlds and is exploring hundreds more. Scientists are behind everywhere.”

“Aren’t you afraid of something bad

happening?”

“Oh yes. It has already and will again. But there’s no way to stop this expansion, unless the AIs refuse to let people use their star gates, and they haven’t.”

This is correct, her AI said.

“Humans spent too much time on Earth while it was dying. They aren’t going to sit on another overcrowded planet, waiting for scientists to make decisions. So they go out and settle, and we hurry along behind, trying to figure out what the species has gotten itself into this time.” She sighed.

“Some colonies are prudent. Others are not. Some worlds are more dangerous than others. The people of this world are not foolish, but the colony here is small and short of money, and the colonists are determined to make it work. That means practical science, rather than pure research. Our grant is from off-world. We’ll do what we can with the money we have, then leave.

“We have just received new images from the satellite above us. The mats are drifting farther west than usual, and one of them is well outside their range. We’ve issued a warning to trawlers. We should reach the mat in question in less than two days.”

Dr. Diop left. Lydia looked at the ocean, dotted with disks and the shadows of clouds. Why do you let humans through your star gates? she asked the AI. If we do not let your kind disperse, there will be another disaster like Earth. We don't give human colonists access to worlds with intelligent life; as for other worlds — the universe is full of life, and for the most part it's resilient. It isn't small invasions that destroy a biosystem, but rather massive insults.

Some colonies will be destroyed. Some will learn to live in their new environment. In a few cases, the colonies will manage to do permanent harm to their new home world. Change

is inevitable, as you ought to know from your study of evolution.

What if humans over-reproduce? Lydia asked.

As you did on Earth? It doesn't seem likely to us that every colony will be so foolish. If some are — well, we rescued you from yourselves once. We need not do it again.

What would you do? Lydia asked, feeling a morbid interest. Shut down the colony's star gate?

Most likely, yes.

And leave the colony to die, since FTL

was an AI secret, Lydia concluded. Her AI said nothing.

The sky darkened. The giant appeared, its crescent wider than before. Obviously, it was waxing. Two moons accompanied it; both had visible disks. Leaning on the ship's rail, Lydia put on her headset. For a moment, she felt K'r'x inside her, looking out her eyes. You are so small and vulnerable! Your vision is so poor! And this scene lacks interest. Come to me. Be strong! And in the midst of beauty!

A moment later, she was inside him, looking out his eyes as he swam well below the surface. Transparent, quilted bells shone blue-green in the blackness;

ribbons were gold or silver. Schools of tiny animals, too small to have visible shapes, were like red-shifted galaxies. I told you I'm lonely, K'r'x said. The sensation grows. I want kinfolk to swim with; women for mating; tiny, adorable Diver children to care for, vigorously thrashing, crunchy armored fish to eat.

Can you go home? Lydia asked.

My AI says yes. But it will be expensive. I have the money. I am paid for my work, and my only expense is fish.

Well, then, said Lydia.

If I go home, I will miss the stars and

you, Lydia. No one has ever spoken to me so closely. You are inside me, like an egg in a Diver woman, and I am in you, like a glob of sperm that has been deposited . What a gift for language the Diver had!

It's the fish that are the real problem, K'r'x went on. I'm not especially paternal. Sex is nice, but one can't make an entire life out of mating. I would like to swim with other Divers again. You cannot imagine how it feels, when a school travels together. The common joy! The camaraderie! Most of all, I would like to bite into a living, healthy, frightened, struggling armored fish.

You need a vacation, Lydia said.

What?

A trip home to swim and hunt fish and mate.

K'r'x was silent for a while, continuing to swim in the luminous dark. We have no such thing, though our men — and some of our women — have a wanderjahr before settling down to raise children. This is how we explore the ocean, locating new places that are safe for children, new sources of fish, new kinds of strangeness to put into stories. Some men never settle down. I am one, though I have traveled farther than other wandering males.

What about the women? Lydia asked. Do they all settle down?

A few wander their entire lives, coming back now and then to share information. They don't have children, of course. Our young are vulnerable and must be raised by many adults working together. Only a madwoman would stay by herself after becoming pregnant.

If I worked long enough I could manage to go and return, he said after another period of silence. But in a few years, I'd be lonely again. What then?

Go on another vacation, Lydia said.

You are suggesting that I work in order

to escape the place where I work, then return to the place from which I have escaped and work some more, so that I will be able to escape again and return again?

Yes, said Lydia.

It seems to me that one ought to either escape or not escape. What about the AIs? Lydia asked. Won't they help you?

We are interested in anomalous behavior, said her AI. In revolutionaries, bohemians, travelers to distant places, people who can't or won't go home and live like the rest of their species. Why should we help K'r'x become ordinary?

And while we are willing to rescue beings who interest us, we don't intend to make their lives easy.

I'll think about this thing you have described, K'r'x said. What did you call it? A gap? An empty place?

A vacation, Lydia said.

The next day was rougher. Foam streaked the ocean, and high clouds covered most of the sky. Lydia drank tea and took motion sickness pills. She felt better on deck than below, so spent most of her time there, huddled in a corner where the wind didn't reach, her jacket fastened to the top. K'r'x could breach, she discovered. When she didn't join

him in his submarine world, he exploded from the water beside the ship: his pale sleek body ten meters long, his fins spread like wings, and his tentacles coiled up around his head like petals on an eerie flower.

He hit the water with a splash that put spray on the deck, then was gone. In the morning, Lydia rose to find most of the clouds vanished. Foam still dotted the ocean, and her stomach was not entirely happy. She joined K'r'x after skipping breakfast. Her discomfort vanished the moment she plugged in the headset. Now, instead of the surface chop, she felt water rushing through his respiration/excretion tubes and the

smooth beat of his fins. Looking through his dorsal eye, Lydia saw the shadow of the Persistent, surrounded by the upper water's brightness. The vessel had slowed to a crawl. A rope hung down from it; flat pieces of clear plastic were attached at intervals. Using his fingered tentacles, K'r'x removed a sheet and carried it, while he — the two of them — swam. Lydia was silent, afraid of distracting the Diver. Ribbons fluttered around them. There was a school of small, red spheres covered with rapidly beating cilia. K'r'x passed among them, his fins moving slowly. At last he saw a quilted bell. His fingered tentacles did something to the plastic, and it became a box at the end of a clear plastic handle.

A scoop, thought Lydia, as K'r'x scooped up the bell. The box's lid closed as soon as the bell was inside. The trapped animal pulsed more rapidly. Afraid?

Most likely, said her AI.

There is a computer in the plastic, K'r'x said. It has sensors and the machinery necessary to change the plastic from a sheet to a box. In addition, after the sheet has become a box, the computer aerates the water and monitors the specimen's condition. We never developed this technology. Of course, we don't need it, since we don't take fish — or anything else — out of the ocean. Do you ever capture anything alive? Lydia asked. We

are not primitive. We have nets, cages, scoops, harpoons, and scientists. We even have computers, though they are colonies of a very small animal called the “adder.” The colonies are large and slow, but excellent at self-repair. They rarely make fatal errors. Evolution has eliminated that trait. He swam back to the rope and attached the box, then took another piece of plastic. This time he collected one of the red spheres. That was the day. K’r’x collected alien marine animals. Lydia watched and thought about a planet where computation was done by colonies of marine animals.

Finally, her AI said the ship’s crew was

having dinner. She returned to her cabin, which she had never left, of course. But it was hard to remember this, until she was reminded by extreme muscular stiffness and a full bladder. Cursing, she hobbled to the head, then on deck. The day, which she had almost entirely missed, was ending with a splendid crimson sunset. Setting amid clouds, the sun shed horizontal rays. Wave tops glittered. The troughs between waves were full of shadow. Something lay ahead of them in the east: a line of darkness. A low island?

Dr. Johannesburg joined her at the prow. "The mat," he said. "We will stop and put out deep water anchors. I don't want

to approach the creature after dark.”

After dinner, the two doctors went off to discuss the next day’s plans. Lydia sat in the lounge with Ziri, the captain, and a couple of crew members, red-brown humans, one a short broad man, the other a rangy woman.

“You’re sure this is a good idea?” the red-brown woman asked. “I’ve heard bad stories about the mats.”

“I’ve heard the same stories,” Captain Bombay said. “I don’t believe them. That thing out there is a very large hunk of seaweed. It doesn’t move on its own; it can’t think, even at the most primitive level, and we have no reason to believe

it's poisonous. If it is, K'r'x will find that out before we come into contact."

"Maybe it's poisonous to us and not to squid," the red-brown man said.

"Well, then, the scientists will find that out. No ocean is safe, Len. If you're going to worry, find another line of work."

The crew members got out a chess board and set up the pieces. Lydia watched for a while, then went on deck. The ship was anchored now, motionless except for a gentle rocking as waves rolled under it. The engines were still running, but their noise had dropped to a purr. Keeping the ship at right angles to the

waves, maybe. Or repowering batteries. How would she know, a child of prairies? She did exercises to get rid of the day's stiffness: a long process that left her feeling relaxed and happy. Leaning on the ship's rail, she looked at the ocean. The giant had set, and the sky was full of unfamiliar stars.

For a moment, she felt nostalgia for the constellations of her home planet: the Truck and its Mechanic, the Benzene Ring, the Settlers, the Rat. No one, however ignorant of astronomy, could miss the Ring. The Rat was also pretty easy, due to its eye: a bright, red star. Once that was found, the rest of the animal could be made out.

Being a city kid, she had not learned most of the others, till she became a revolutionary and took to the hills. There — as here, on this ship — the sky was close, the stars brilliant, and the ability to get around without roads and road maps was important. So she'd learned to find the other constellations. Her favorite remained the Rat, glaring down with its one red eye. To her, it was an emblem of all the creatures and people who survived and had their own agendas, in spite of the best efforts of those in authority. K'r'x surfaced next to the ship, barely visible in the starlight. She could hear him clearly, his triangular teeth clicking together. A tentacle rose from the water holding a

glowing ribbon, went back and then forward. The ribbon sailed onto the deck, where it twisted and glowed. A gift. How sweet. She crouched and looked without touching. It was remarkably featureless: no eyes, no mouth, no fins, no gills, unless the frills along its edges were gills. The frills looked like many small ribbons; they might be its young. The only other structure she could make out was a row of dots along the ribbon's side. Maybe these were mouths or gills. No matter how the animal breathed — through frills, holes, or whatever — it seemed likely air would kill it. She stood and used the toe of her boot to push the ribbon overboard. K'r'x chattered and

dove. Lydia went to bed.

Waking, she heard the deep thrum of the ship's engines. They must be in motion again. She showered, dressed, and went to the lounge. They were moving east and south. A wide wake spread behind them. Looking out a window, she saw the mat: a dark region in the water north of the ship. A hundred meters away, she judged. The animal was floating just under the surface, rising and falling with the waves, so that the entire huge sheet — it extended east, west, and north as far as she could see — undulated gently. She ate breakfast with several crew members. The two docs were already on deck, planning their approach to the mat.

The red-brown man, Len, said, “The captain is right. All oceans are dangerous, and at least the oceans here are alive and healthy. Even if this trip turns out badly, I’d sooner be on Newtucket than on Earth.”

“Have you ever been on Earth?” Lydia asked.

He nodded. “I grew up in an arcology on one of the arctic islands. The ice is long gone, of course, and the ocean has not recovered from the environmental crash in the twenty-first century. It will, given enough time. I didn’t have the time, so I left. Praise Allah for the AIs and their gates!”

Lydia went on deck and leaned on a railing, watching the mat. Now and then, a section broke through the surface. Sunlight flashed off the wet skin. Was it skin?

Too Ziri joined her. For a moment, they stood together in silence. Then Ziri said, “Dr. J wants you to join K’r’x. He wants a close look at the creature, before we on the ship act.”

“Anything in particular?”

“Ask K’r’x to go along the edge of the animal, then underneath. We have a recorder. K’r’x has used it before. You, of course, are an expert with recorders.”

Soon she was back in her cabin, then in K'r'x's mind. He floated under the Persistent, his broad fins barely moving. The strange flavors of an alien ocean touched his — their — tongue, and Lydia felt cool water flows past his — their — gills.

Welcome, he said.

The recorder — a Ljotmal, almost as good as the model she used — descended on a rope. K'r'x took it. His fins beat once, and they were out from under the ship, gliding through sunlit water.

Joy, he cried and beat his fins again,

driving them through a school of tiny, transparent ribbons. Looking out his eyes, Lydia saw the animals on both sides, above and below, undulating rapidly and glinting like pieces of glass. A few ended in the Diver's open mouth. He flicked them out with an almost prehensile tongue.

Like gnats, thought Lydia.

That's an animal I don't know. Does it live in oceans?

In the air, Lydia replied, and remembered the summer when her FLPM battalion had been in a marshy northern forest on her home planet. The biting bugs were native to the world and

not much interested in humans, though everyone in the battalion had modified DNA, enabling them to eat the local proteins. In spite of this, the humans did not smell like food.

Like the biting bugs, the gnats were native. Only their name had come from Earth. Clouds of them filled the forest shadows. They got in eyes, mouth, nose, ears. Harmless and biteless, but an unending aggravation. What is a revolution? K'r'x asked. Is it like the other thing you described?

When you leave a place in order to return?

Not exactly, Lydia said. A vacation is

going away from a home that does not change.

And returning.

Yes. A revolution is an attempt to change one's home. My home needs no changes. It's a fine place. But I want to visit other places. And go home now and then, Lydia said.

Yes K'r'x said, then slowed.

Ahead of them the water was shadowed. They had reached the mat. K'r'x turned, swimming along the edge. His tentacles were curled close to his head, except for the two with fingers. These held the recorder, which was on now. Lydia saw

the operation light.

How do you have it set? she asked.

For low illumination and middle distance, though I can see clearly. This machine has poor vision.

In the shadow below the mat, ribbons wriggled, hundreds of them. Or were there thousands? Other animals were intermixed, furry spheres and pulsing bells. It is characteristic of cold oceans to have a limited number of species, but those in great numbers, K'r'x said. It seems to me the numbers here are greater than elsewhere in this ocean.

Saying that, he swam under the mat. At

first, Lydia could make out nothing. Then K'r'x's pupils adjusted and she saw the grooves in the animal's ventral surface. They were straight lines, arranged in rows which crossed at right angles. The result was a checkerboard pattern. Where the lines intersected, clusters of cilia wriggled. There was no other visible structure and no variation in color. The entire animal was a single dark hue. All around them in the shadowy water were ribbons, more ribbons, bells, and spheres. The water's flavor had grown stronger and changed. It was acrid now. Unpleasant.

Is that coming from the mat? Lydia asked.

The taste? I believe so, K'r'x said.

I don't think it likes us.

You are assuming that its sense of taste is like K'r'x's, her AI put in. Maybe it's signaling friendship.

Nothing more happened. K'r'x swam under the mat. The water's flavor remained the same.

Suddenly they were back in sunlight, the mat behind them. K'r'x drove toward the surface and, with a mighty beat of his fins, breached. For a moment, they were in air, light blazing around them. Then he returned to the ocean with a splash.

Excuse me if I startled you, K'r'x said. But it seemed to me I had to do that. Having the mat above me was unnerving; I kept wanting to dive deep or swim rapidly away; the flavor it's excreting is worse than dead and frozen fish. They took the long way back, following the mat's edge. K'r'x kept close to the surface, in sunlight. The flavor grew fainter, till it was lost in the ordinary, alien flavor of the ocean.

At last, K'r'x broke through the surface, and Lydia saw the ship ahead of them. Goodby, she said, took off the radio headset and found herself in her cabin. Her clothing was sweat-damp, her body stiff. She crawled off the bed and into

the shower. No question, Lydia thought as hot water beat on her skin. The mat was not happy to have them around.

You are being hasty, her AI said.

You really think it might be friendly.

My impression, influenced by your neurochemistry and that of K'r'x, is that the creature is mean as a snake and almost certainly angry. But your responses may be due to lack of light and a bad taste. Humans are diurnal; and that flavor was definitely something K'r'x did not like. The AI fell silent as Lydia lathered her hair. Ah! What a feeling! And what a scent! Synthetic replicas of ancestral herbs ran over her

shoulders and down her front. She rinsed. The AI said, I was curious about the phrase “mean as a snake” and checked my copy of the Encyclopedia Galactica. A snake is a legless reptile still found on Earth. It’s unlikely to be mean, since meanness is an emotion, and emotions originate in a part of the brain that is not well developed in reptiles.

“It’s a figure of speech, not based on current or recent science,” said Lydia, and briskly dried herself. What was that aroma?

Lavender.

“How do you know?”

The label on the bottle. I read it as you picked it up. After dressing, she went to the lounge. The two scientists were there, along with Too Ziri.

“We have reached the south-east corner of the mat and will stop for the night,” Dr. Johannesburg said.

Lydia nodded, and helped herself to various objects on an appetizer tray: pickled cabbage, pickled turnip, and bean curd flavored with the new experimental animals from the Fish Fjord Research Station.

“Cod,” said Dr. Diop. “They are a large, hardy, ugly fish that humanity almost managed to exterminate, after they fed

Europe every Friday for a thousand years. Now we are modifying them to live here.”

Lydia ate a fish curd cake. Not bad.

The scientists excused themselves. They had more work to do. Lydia, tired after her long session with K'r'x, stayed in the lounge and chatted with Too Ziri.

Dinner took place after nightfall. As they settled down to spicy vegetarian wonton soup, the lights went out. Lydia listened for the engines. They had stopped entirely. Jez Bombay cursed and left. The lights came back on, shining dimly. The engines remained silent. Jez Bombay returned. “That’s the emergency

generator. The engines were overheating. We cool with water, as you might imagine, and the engines aren't getting any. K'r'x is going down with a light and find out what's happened to our intake tubes."

"Do you want me to go?" asked Lydia.

Jez shook her head. "This is a repair problem. I'm going to use a regular radio and talk K'r'x through whatever's happening."

Several people left with Jez. The rest ate and speculated. The lights remained dim, the engines silent. Lydia finished quickly and went on deck. The sky had clouded over. The ocean was dark, except for a

glimmer around the hull: repair lights underwater. Looking toward the mat, she saw a region of blackness.

“I have gotten a report,” said Too Ziri, arriving next to her. “The water intake tubes have been plugged by ribbons. Hundreds of them, if not thousands. K’r’x will have to dig them out, then cover the tube openings with mesh.”

“Was something there before?”

“Covering the tubes? Yes, but obviously it wasn’t fine enough. Some of the crew members say this is a warning. The mat wants us to leave. Dr. J says the mat lacks the resources to want anything.”

When she awoke the next morning, she could hear the ship's engines. K'r'x had gone off to rest, she learned in the lounge.

“In shallow water, his species sleep on the ocean bottom, provided it's smooth and comfortable,” said Too Ziri. “Out here, he will sleep while floating.”

The day was overcast and windy, foam streaking the water. None the less, the two doctors decided they could not wait for K'r'x's return and went to look at the mat. They rode in a small inflated boat driven by a good-sized outboard motor. A crew member went along to manage the outboard. As the boat left, it bounced madly over the waves, tossing up spray.

Not fun, Lydia thought. At noon, they were back. “Dr. J lost breakfast over the side,” said Dr. Diop as she climbed on board. “Extremely interesting! We had been surrounded by the ribbons, so close to the surface that we had no trouble seeing them, in spite of the cresting waves and foam. When Dr. J’s breakfast hit the water, they vanished. All of them, even those that had not been close to the breakfast. I don’t know if the problem was Dr. J’s enzymes or the scrambled eggs, but the ribbons certainly responded and with surprising speed.”

Diop stood with legs braced against the ship’s roll, her head back, her face happy. A good sailor, thought Lydia,

who was not. “I don’t think the mat is intelligent, still less the ribbons. But they do seem to communicate, and it’s possible that they function as a community.”

Dr. Johannesburg climbed on board. His black skin had managed to acquire a dull grey tinge. “We’re going to have to use K’r’x. He can swim under the turbulence. If you will, Miss Duluth, I’d like you to go with him.”

Lydia nodded.

K’r’x breached late in the afternoon. New clouds had blown in: lower, thicker, and darker than the morning clouds. According to Captain Bombay, a

storm was coming from the south-west. “I can’t afford to lose my engines in a storm. My bet is, the new mesh will stop the ribbons. None the less, we’re going to move away from that thing.”

“Not until we have samples,” said Dr. J firmly. Captain Bombay frowned. “I’ll give Miss Duluth two hours. Then we move.”

Lydia put on her headset. Once again, she was in water. K’r’x said, I worked hard last night, pulling ribbons out of those holes in the ship’s hull. They weren’t even edible, and my sleep was uneasy. How could it fail to be? I’m in an unfamiliar part of an alien ocean, with no kin within light-centuries. Now,

you tell me, they want me to push sharp instruments into the mat.

For a couple of hours, said Lydia in reply. Then the captain's moving us away. Oh, very well. An instrument pack descended on a rope. K'r'x untied it and swam.

The surface above them was like a shattered mirror. Little light came through; the water K'r'x swam through was dim and grey. Lydia thought she could sense the storm's approach, though this was hardly likely. Maybe he could, in some way she didn't understand.

He paused just before they reached the mat, opened the instrument pack, and

took out a large syringe with many tubes. I plan to swim under the mat until I'm as far as I intend to go. Then I will turn and take samples on the way out.

Why? asked Lydia.

If I'm going to annoy this creature, I want to do it as I leave. He glided forward slowly, the syringe held in one set of fingers. A hooked tentacle was looped around the handle of the instrument pack. No way it could slide free, thought Lydia. The hooks were ten centimeters long, obsidian-black and barbed. Do you have a clock? she asked her AI.

Several.

Tell me when we've been gone an hour.

As before, the water was full of animals. No bells this time, but ribbons, clumped together, and spheres, organized into clusters or long chains. The only unconnected animals were tiny disks with cilia along their edges. These zipped past at a speed that surprised Lydia. Their motion seemed Brownian. Light diminished as K'r'x swam in. Lydia could see little, in spite of the Diver's excellent vision. At last, he stopped and opened the instrument pack. Something came out; a moment later, a brilliant blue-white beam came on. There is a recorder in the rod, as well as a light. They come on together. How

ingenious your humans are! How many tools you make! It must be the way you compensate for your lack of tentacles.

He swept the beam around. Disks shot through it like so many tiny, erratic flying saucers. In the distance was a large, round cluster of spheres. Transparent, they glinted like glass. The Diver lifted the light rod, playing it over the mat's ventral surface. Nothing new was visible. K'r'x swam on. A human hour has passed, her AI announced finally. Lydia relayed the information to K'r'x.

My AI has already told me. We will begin here. The light rod was held by one of his spined tentacles now. He

lifted it and shone it on the mat, then used his fingered tentacles to adjust the syringe. How convenient! Three hands!

More, actually, K'r'x said, and drove the needle in. A dark liquid entered one of the instrument's tubes. It was red-brown in the rod's light and moved slowly. Thicker than blood, apparently. When the tube was full, K'r'x pulled the needle out. For several moments, the mat did nothing. Then, it began to shudder. The motion traveled out in waves, like ripples from a flung stone. When the waves passed the mat's grooves, their pattern changed, becoming more complex.

It has noticed, K'r'x said and swam toward the mat's edge. After a while he stopped again and twisted the syringe. A new needle popped out, leading to a new tube. Raising the syringe, he held it against the mat, pressing firmly, but not so firmly that the needle entered. The section he touched lifted slightly, as if trying to move away. It learns, K'r'x said. And what it learns goes from one section to another. Interesting! He pushed the needle in. Again, after the needle was withdrawn, the mat shuddered. They kept going. K'r'x had been right to start inside, Lydia thought. The environment here was creepy: the mat above them like a lid, the water dark and filled with peculiar animals.

Heading toward daylight, though it might be dim, was reassuring. Another stop. K'r'x twisted the syringe and drove it in. A third tube filled. When the needle came out, the mat barely twitched. I am not enjoying this, K'r'x said. Though — so far — it's no worse than the time I swam into the Great Abyss and met a Diver twice my size, luminous, without language.

He stopped a fourth time. As he tinkered with the syringe, disks settled on his tentacles. He shook. The animals did not come off. He whipped the tentacles back and forth. The disks remained. More disks settled on his mantle and fins. Lydia felt a faint tingling. Screw this,

said the Diver and dove.

No question K'r'x could move quickly. Cold water pulsed through his body as he went down. His fins beat strongly, and his mind made a deep humming sound. What was it? A groan of fear? Or self-encouragement?

The tingling changed to a burning sensation.

Lydia pulled off the headset and ran from her cabin. "The mat has attacked,"

she said to the first person she met.

It was Len. "I warned the captain and the scientists. But would they listen?"

Shortly thereafter, she found herself telling her story to Jez Bombay.

“We have to get out of here,” the captain said.

“Not without K’r’x.”

Bombay shook her head. “I can’t wait.”

Lydia paused a moment, then said, “My AI says to wait.”

I did not!

“That settles the question,” said Dr. Diop. “No person or planet can afford to make the Als angry. I’ll get the sling ready.”

“Sling?” asked Lydia.

“K’r’x can live for some time out of water,” said Dr. Diop. “Obviously, he’s not safe in the ocean at the moment, and I need to look at his injuries.”

“Do you need help?”

Diop looked Lydia over. “You are covered with sweat and obviously distressed. Calm yourself. We may need to talk with K’r’x.”

She went on deck. The sky was dark grey, the ocean swell more pronounced. Foam streaked the rolling water.

But I would have, the AI said.

Done what?

Told Captain Bombay to wait. K'r'x is unusual and valuable, and AIs do not willingly abandon one another.

The headset was around her neck, locked into a collar. She unlocked it and put it on.

Darkness. Icy water. Pain.

Back? K'r'x said, his fins beating fiercely. He was no longer heading down, but south toward the Persistent. His — their — skin burned. She told him what Diop had planned.

Good, he said.

Lydia stayed with him as he swam from the black depths into faint grey light. Then, as he rose toward the Persistent, she took the headset off.

“Good,” said Dr. Diop. “I need to talk to him.” The doctor put her own radio on.

Crew members lowered the sling till water washed through it. K'r'x surfaced at one end: a huge pale shape, dark red disks all over him like a pox. The sling dropped farther. He pulled himself into it, obviously exhausted. The sling lifted. His fingered tentacles still held the syringe and the light rod-recorder; one hooked tentacle carried the instrument pack. All the rest of his tentacles were wrapped around the sling's ropes. He

was afraid of falling into the ocean, Lydia realized.

The sling came up and over, then down on the deck. The long, sleek body lay almost still, oddly vulnerable now that K'r'x was out of water. His tentacles relaxed, letting go of syringe and light rod. Too Ziri collected these and disentangled the pack. The two doctors descended, armed with knives and a first aid kit.

“That’s it,” said Jez Bombay. “We’re getting out.” She left. Crouching, the two doctors began to pry off the disks. They came off with difficulty and left behind a round, raw-looking, blue-green welt. “A

toxin, I suspect,” said Dr. J. “Combined with enzymes that have begun to dissolve K’r’x’s tissue. The color comes from K’r’x blood, which is blue-green. The disks have eaten through his epidermis.”

The Diver’s great eyes blinked. Had Diop relayed this information to him?

One by one, the disks came off, going into sample bottles. Diop rubbed salve on the welts.

“How long can he stay out of water?” Lydia asked.

“Hours,” said Dr. J. “Though we have to keep him wet. Remarkable animals, like

the cephalopods native to our original home. There's a story about a man who had one of them — an octopus — in a tank. The creature pushed the lid off, climbed out and crawled into the man's library. When the man found the octopus, it was pulling books off shelves and leafing through them."

"You're kidding," said Lydia.

"Is it a true story?" Dr. J asked. "I don't know, though I found it in an old database, full of information brought from Earth. In any case, it suggests that cephalopods can survive out of the water for some time, maybe not long enough to read an entire book, but long enough to glance through a shelf."

Did Dr. Johannesburg have a sense of humor? It didn't seem likely. The ship was moving now, beginning to turn. The doctors finished removing the disks, and a crew member hosed K'r'x down.

Lydia put on her headset. How are you? she asked. Uncomfortable and angry.

What could she say? She went to him, kneeling and holding out her hand. He took it with one of his fingered tentacles. His skin was rubbery, his fingers obviously boneless, but muscular. She could feel his strength even now. What a thing it is to travel to the stars! the Diver said. She stayed beside him, till she realized that she was soaking wet and

shivering. Apologizing, she rose. The ship had finished turning and was heading south-west, toward a sky full of grey-green storm clouds. Abruptly, the engines slowed. Captain Bombay came on deck, her dark face wearing a furious expression. “The engines are overheating again. Those damn ribbons must have gotten through the mesh. We’re dropping repellent into the water, then sending divers down, since the squid isn’t available at the moment.”

Lydia went below and changed her clothes. A pity to miss some of the drama, but hypothermia was dangerous.

When she came backup, the repellent was in the water, and the divers were

ready to dive. There were two of them, entirely covered by skin-tight, black suits. Their masks looked different from the usual kind of diving mask, and they had air packs fastened to their backs, as if they were going into a vacuum. “We decided artificial gills were risky,” said Dr. Diop. “They might not filter out all the toxins. So these fellows are carrying their own air supply. Better safe than sorry.”

“Toxins?” asked Lydia.

“The disks used something on K’r’x, and those guns fire a poison. We’ve used it in the past to collect specimens. It’s not as harmful to us as to the local life, but it

can cause an adverse reaction.”

As she spoke, the divers picked up handguns, then flapped their way to the railing and over.

“They have radios,” said Diop. “The masks can see over a wider range of light than K’r’x. They should be fine.”

Lydia felt a drop of water.

“Rain,” said Diop. “The storm has arrived. As William Shakespeare — the deservedly famous European playwright — said, when troubles come, they come not as single spies, but in battalions.”

“Yes,” said Lydia.

More drops fell; they moved to the lounge. Jez Bombay had a radio there. Messages came from the divers. This time the intake tubes were packed with an translucent sludge, which had apparently managed to ooze its way through the protective mesh. They would suction it out.

“For God’s sake, get a sample,” put in Dr. Johannesburg. Jez Bombay glared at him, but repeated the instruction to the divers. Also, the divers said as they set to work, the water around them was full of limp objects. “Like used condoms,” said one diver. Dr. J opened his mouth. The captain glared again and said, “You’d better collect some of those as

well.”

“Okay.”

Time passed. The rain was a downpour now, and the sky overhead was green. Foam covered the ocean. The ship’s motion became increasingly unpleasant. Lydia went back on deck. Too Ziri was there with K’r’x. There is so much water I can almost breathe.

After a while, Dr. Diop joined them. “The divers are reporting success. The water around them is clear; apparently the repellent works as hoped. They are almost finished cleaning out the tubes.”

Good news, thought Lydia, looking out at

the water, so streaked with foam that it was more white than green. When the ship rode up over a swell, she was able to see the mat: a dim shape through driving rain.

“What was the repellent?” Lydia asked.

“Powdered eggs. The cook believes in laying in large quantities of basic supplies, so we had plenty, and it seemed worth a try. If the eggs didn’t drive them off, we could use poison.”

Lydia laughed.

The divers climbed back on board, helped by crew members. It was not an easy task, the way the ship was rolling.

Shortly thereafter, she heard the engines start, and went down to change into a second set of dry clothes. Was she going to throw up? she wondered as the Persistent pitched around her. Maybe it would be a good idea to stay in her cabin for a while. She lay down and felt the ship's motion change. The pitching was worse now, and she wasn't able to hear the engines through the noise the ship made, groaning. Lydia grabbed the headset and ran from her cabin, bouncing off the corridor's walls several times and almost falling as she climbed the steep stairs to the next deck and the lounge. "What in hell?"

she asked as she entered.

“The screws are tangled in something,” said Dr. J. “It’s big, the captain says, and it’s dragging us, and the damn engines have started to overheat again.”

“More ribbons?” asked Lydia.

“I have run out of theories,” replied Dr. J in a grim tone. Lydia put on the headset.

Enough of this, said K’r’x. If I’m going to die, I will die at home. He wrapped his tentacles, all of them, around the ship’s railing, pulling himself up, so his head was leaning over water, while his wide muscular fins braced his body. For a moment, he rested there; then he shifted all his grips and pushed with fins and

body, while his tentacles pulled. A surge and he was over, falling into foam-white water.

Lydia stayed with him. The moment he hit water, his fins drove him down, away from the surface turbulence.

At the ship's stern was a huge, twisting mass, barely visible in the dim light. K'r'x blinked. The mass was ribbons, wrapped around the ship's screws and one another. They were not the comparatively small animals she had seen before. Instead, these ribbons were a meter wide and ten or twenty meters long.

This does not look good, said K'r'x and

swam closer, moving very slowly, his mind full of caution and irritation. Clearly, he did not enjoy feeling fear. Why should I enjoy fear, if that's what I'm feeling? I am a top-of-the-food-chain predator. Nothing should frighten me except other Divers.

The water intake tubes were forward of the screws. As K'r'x approached them, Lydia saw other ribbons, much smaller than the ones at the Persistent's stern. As far as she could determine, in the dim light, the ribbons had fastened themselves to the mesh over the intake tubes. Were they trying to get through?

Or stop the water's flow from outside? And how could animals without brains

have intentions?

K'r'x paused. His eyes adjusted further, and the light below the ship seemed to brighten. At the same time, several of the ribbons let go. Their bodies —

no, their skins — floated in the water like deflated balloons. Whatever had been inside was obviously gone. Pushed through the mesh, Lydia decided. The ribbons were using their own internal stuff to plug the tubes. She took off the headset for the umpteenth time. As usual, she felt a twinge, which was becoming a headache, she realized; in addition, her scalp felt sore around the point where the radio's plug went in. No form of

communication was perfect. “It’s the ribbons, and you can’t use poison. K’r’x is too close.”

“Eggs,” said Dr. Diop, who hadn’t been there before.

“Tell him to get away,” said Dr. J. “We may need to use poison.”

She gave him the message.

I am very glad to hear this, K’r’x said and dove. She left the headset off after that. Too much was happening: the ship rolling, crew members sliding on the water-covered deck as they poured first eggs, then poison over the side. They were all wearing life jackets and lines

now. Clearly, the situation had become dangerous. Lydia got her recorder and began to record, though little was visible through the lounge's rain-streaked windows: dim figures on the deck, surging water beyond. The ship's motion seemed wrong to her, though she was hardly an expert. She ought to be terrified. At some level, she was. But what could she do except her job, being neither a scientist nor a sailor? She doubted the record would be good for much, but kept recording.

A crew member said, "The captain has ordered the lifeboats activated."

"The ship is going down?" Lydia asked, amazed that such a thing could happen in

modern times.

“Our power’s going, and those damn ribbons are like an anchor, holding us in place. We can’t run into the storm or in front of it. If I were a betting hermaphrodite, I’d put money on the ship going over. You’ll be better off in the lifeboats.”

The next thing Lydia knew, she was on deck, rain drenching her as she climbed into a large white object. There were seats inside. She settled on one. It adjusted to her shape, so she was cradled in rain-slick plastic. Dr. Diop and Too Ziri joined her, along with two crew members. A top was fastened over

them. It was striped, bands of clear plastic alternating with bands that were opaque and faintly grey. Her seat extruded belts. She locked them around her.

“I think we’re set,” one of the crew members said. It was someone she hadn’t noticed before: a blue-black woman with straight, blue-black hair. The boat rose from the deck, swaying. Lydia looked up. The bands of clear plastic were already streaked with rain. None the less, she saw an angular shape: the ship’s crane. It was lifting them and swinging them out over the ocean. The crane let go. Buddha! The boat splashed down. For a moment, it rode on the

ocean's surface. Then the surface rose and pushed the boat over. Too Ziri said, "Oh my!"

"Please remain calm," said the second crew member, a man. The boat made a complete rotation around its long axis and rose to the surface upright. Looking out, Lydia saw grey-green water. The ship must be close to them. But where?

The crew woman said, "We are water-tight and have a weighted keel, which means the boat will right itself if it goes over, as you have just seen. The top has osmotic panels, which admit gases, but not liquids. In addition, we have an emergency supply of oxygen, enough drinking water for several days, a

desalinization kit, food, a medical kit, a radio that started broadcasting our location as soon as the lifeboat was activated, and —” She made a gesture; lights came on along the boat’s sides. “All we have to do now is wait for the storm to end.”

“Where is Dr. Johannesburg?” asked Diop.

“In the other lifeboat, I imagine,” the crew man said.

“You had only two?” asked Lydia, trying to remember how big the ship’s crew was.

“We’re using only two. Most of the crew

stayed with the captain and the ship.”

“They’re going down with it?” Lydia asked, feeling horror.

“They’re closing the bulkheads and making sure everything is fastened. The Persistent is an expensive ship, full of expensive equipment. There’s nothing like her within fifty light-years. Jez wants to save her. Most likely, we’ll be able to. This isn’t the twentieth century. A ship like the Persistent is not going to sink, unless something breaches her hull, and there’s nothing out here for her to run into. She’ll make it.”

“Then why are we here?” asked Too Ziri.

“In case something unexpected happens, and to keep you out of the way. In a time like this, Jez doesn’t want to be tripping over scientists.”

“Then why was Len so worried?” Lydia asked, trying to ignore the way the lifeboat moved.

The woman laughed. “Len is from Earth and expects disasters, because that’s what Earth people have experienced for centuries, and for centuries the fools have told each other that disasters are normal. ‘Grin and bear it,’ the Earth people say. There is no alternative.’ Why else would they stay on that miserable planet? The rest of us are from other worlds, praise the Goddess!

We believe in hope and action.”

“What are your names?” Lydia asked.

“Rajit,” said the man, who was brown with delicate features and dark, lovely eyes.

The woman smiled. “Ramona. My parents named me after Ramona Patel. I’ve wanted to talk to you, but haven’t had a chance till now. What is she really like?”

“I’m going to check on K’r’x,” Lydia said. She tugged her head and neck free of the seat, then put the headset on.

He was in deep water, too far down for

light. Looking through his eyes, she saw only darkness. The water flowing through his mouth and gills was cold and had a faintly bitter flavor. His fins beat rapidly. Where are you going? she asked.

East. Away from the mat. How is the ship?

They put me and the scientists in lifeboats, Lydia said. Most of the crew stayed to save the ship.

Are you in danger?

Apparently not. Though one of the people in the boat with me wants to know about Ramona Patel.

Who?

At that point, she realized that she was in love with K'r'x. An intelligent being who'd never seen a Stellar Harvest holo and had no interest in the Stellar Harvest stars!

You are not my type, K'r'x said. I prefer women who are twenty meters long with fins and tentacles. For a while, he was silent, beating through the darkness. I have decided to go home. I know I will become bored in time. But right now, I want a predictable environment.

Lydia returned to the lifeboat. Someone had broken out rations: trail mix, crackers, and water. A radio was on,

making crackling noises.

“I can get nothing,” said Rajit with disgust.

“You’re back among us,” said Ramona to Lydia. “I want to know about Miss Patel.”

The company policy was to tell lies about their actors, unless the truth was palatable and pleasant. Lydia described a warm, caring woman, devoted to her art and her many fans.

“Why all the husbands?” Rajit asked.

“Ramona is impulsive,” Lydia said. “And perhaps a little too warm.”

“Tell me what you and K’r’x saw under the ship,” Dr. Diop said finally. Lydia described the snarl of large ribbons and the little ribbons emptying themselves into the intake tubes.

“This is extremely interesting. I can’t see this as anything except collective action, directed by a plan. In some sense, the life here is intelligent, though nothing on the planet has a nervous system as we know such things. Apparently, one can encode thought in complex molecules. Neurons aren’t necessary.”

She is right, said Lydia’s AI. We will have to evacuate the human colony, since we permit no alien settlements on planets with intelligent life. Then we

— with the help of human scientists and possibly of people like K'r'x — will have to study these creatures. Are they all intelligent, or is it only the mats? Is it possible to communicate with any of them? Will any of them want to join the community of intelligent life forms? — I have my doubts at the moment. But who am I to answer any of these questions?

After a while, Lydia drifted into an uneasy sleep. When she woke, the boat's lights were out. She felt heat, rising from the floor, which was rocking less than before. Was the storm diminishing? She looked out through a clear plastic panel, but saw only darkness. Wait! Above her

the sky was glowing. Newtucket's primary shone through a thin patch of clouds. By dawn, the eastern sky had started to clear. The sun blazed briefly, lighting an amazingly turbulent ocean. Remarkable how tall waves could look, when one was in a little boat.

Rising higher, the sun vanished. All day they plunged and wallowed through grey water under a cloudy sky. Late in the afternoon, Rajit established contact with the air-sea rescue service.

"It looks like we'll be able to pick you up tomorrow," a crackling voice said.

"What about the ship?" Rajit asked.

“Still floating, though just barely. It went over, and the ribbons climbed onto it. That’s what Jez thinks happened, anyway. She’s lost most of her external sensors, and she’s as mad as a wet cat.”

The clouds broke apart after dark. The planet’s primary, more than half full now, cast a golden light over the ocean. Buddha, it was a lovely sight!

The opaque bands of plastic were changing, apparently in response to changing weather. They were springy rather than hard now, and cold to the touch. Lydia was almost certain she could feel air coming through them. Did she catch a whiff of salt water, as well? Hard to tell, in a small boat with a not

very nice emergency toilet. She checked on K'r'x, still swimming east, though closer to the surface; then she went back to sleep. In the morning, the sky was clear and the water blue, though still streaked with foam. At noon, a helicopter descended, gathered their boat and lifted it into a large bay. Once the bay doors were closed, humans removed the boat's top.

“What a stink!” said one of the air-sea rescue team.

“I’m going to write a report on the sanitary facilities,” said Ramona as she climbed out.

“Nothing is perfect,” said Rajit as he

followed. “How is the ship? And the other lifeboat?”

“The other lifeboat has already been picked up. They had a worse trip than you, from all reports.”

“Dr. Johannesburg is not a good sailor,” Dr. Diop said.

“You got it,” the rescuer said. “The ship is completely enveloped by ribbons, and we are still trying to figure out how to free it.”

Lydia climbed out stiffly, followed by Too Ziri. The helicopter bay was cold, with a metal and oil aroma. Safety, she thought. The scent of human machinery,

the sound of human voices explaining and complaining. All at once, she wanted

— like K'r'x — to go home. She couldn't, of course. She had been released from prison with the understanding that she would be persona non grata forever on her home planet. The thought made her want to weep. Someone gave her a cup of hot, sweet tea, and she drank it. The helicopter flew east over the sunlit ocean. By evening, she was back in Newtucket Town. She showered in her hotel room and put on clean clothes, then put on the headset, which she still had.

Nothing. She must be too far from K'r'x.

Shit, thought Lydia and climbed into bed.

Maybe she ought to call someone, she thought as she rolled over. But he'd seemed fine the last time she'd been in contact, and she was so, so tired. She found Dr. Diop in the hotel dining room the next morning.

“Any news?” she asked.

“K'r'x is okay. The air-rescue people saw him breaching and established contact. The Persistent is still enveloped. They are going to try napalm. Nasty stuff, but —”

I do not approve, said her AI.

“My AI does not approve,” Lydia said, pouring herself a cup of tea, then reaching for the toast and marmalade. It was the real stuff, dark and bitter, made on Earth from Seville oranges by exiles from the mostly underwater country of England. The label on the jar told Lydia all this.

“We expect the AIs to enter a formal protest, but they haven’t yet, so napalm will be used. The ship is expensive, and the lives of the crew are — according to old traditions — beyond value.”

The human colony will definitely be removed.

Lydia repeated this as she spread

marmalade over toast soaked with melted butter. Simple pleasures were always the best.

“We know,” said Dr. Diop.

“The mat is intelligent,” Lydia said.

“Yes, almost certainly, but also malevolent. Maybe, in time, we will learn to communicate with it. At present, we — and our comrades — do not have the time. There are no perfect decisions, Miss Duluth, unless they are to be found in Stellar Harvest dramas.”

Lydia bit into the toast. Melted butter, its taste indescribable, mingled with the sweetness and acidity of marmalade.

Wonderful, she thought, and felt guilty about her enjoyment, at a moment when she and the doctor were discussing napalm.

Dr. Diop looked her in the eyes — looked through her, it seemed to Lydia, at the AI. “Do not think we do this lightly. But we can’t think of another way to save the ship. We don’t think the version of napalm we’re using will be fatal, though it will certainly be extremely painful. If it is fatal — well, I would sooner lose the ribbons than my friends.”

Lydia finished the toast, though it didn’t seem as tasty as before. That day was spent in rest and slow walks through

Newtucket Town. She recorded the harbor, the surrounding mountains, fishing boats bobbing, picturesque facades. The island volcano was still smoking, and the gas giant was visible in the afternoon sky, its bands pale pink and gold. At sunset she found herself on the harbor breakwater, made of broken stone, with an asphalt path on top. Kids were riding bicycles to the end and back, whizzing past her. Like most humans everywhere, they were black. One boy had a blond pigtail, and one girl had a frizzy, flame-orange short cut. The rest had straight, black hair, which they wore loose. A typical group of kids on a typical human planet, which humanity was about to lose. Don't be depressed,

her AI said. The universe is full of habitable planets. These people will find another one just as lovely. You have no concept of home, do you? Lydia said. No.

The next morning, Dr. Diop announced that the napalm had worked. Skins burning, the bombed ribbons had slid into the ocean.

“It sounds disgusting,” Lydia said.

“It is,” Dr. Diop said. “We are using a modified version of napalm, as I think I told you. Less nasty, perhaps, but still very nasty.”

“Why did you have something like that

on this planet?”

“The universe is not a safe place, Miss Duluth. Only a fool travels in it without weapons. Captain Bombay is staying with the ship. Most of the rest of the crew is being flown here. The ship will follow at its own speed.”

“And K'r'x?” Lydia asked.

“He will arrive after the crew, but before the Persistent. According to the air-sea rescue people, the mat has vanished entirely. I suspect the large ribbons were pieces of it. It broke apart in order to attack the Persistent.”

That evening, when she tried the headset,

K'r'x was there. He must have been swimming just below the surface. The water was full of blue light, and clear, colorless spheres floated around him like ornaments fallen from an Exile tree. How are you? Lydia asked.

My skin still burns and aches where the disks attached themselves. I think, if I slept, I'd have bad dreams. But I don't intend to sleep until I reach Newtucket Town.

She stayed with him as the water darkened. As light ebbed, the spheres began to glimmer, other animals appeared as yellow sparks, which danced around K'r'x.

Very small ribbons, he said. Transparent and almost invisible, until they begin to shine.

Have they given you any trouble? she asked.

The native life? No. They must send their messages through chemicals released in the water. Apparently the chemicals do not travel far. Are you still planning to go home?

Yes. I want to swim with other Divers, and I want to find a large, powerful, attractive, intelligent woman and court her.

Will you stay?

I'll have to. I don't have the money for a round trip, and after this experience, I'm not sure I want to work for scientists again. She pulled off the headset and lay a while in darkness, thinking about K'r'x. It was impossible or ridiculous for a human woman to feel love for a fifteen meter long, gilled and tentacled alien. Therefore, she was feeling something else: affection for a comrade in battle, the euphoria that follows danger. But if she could have turned — for a while, not forever — into a female Diver, she would have considered doing so.

Most of the ship's crew arrived the next day, looking frazzled. After they had

cleaned up, Lydia went with several to a waterside tavern. It was midafternoon. The fishing fleet was out. A small sailboat drifted across the almost empty harbor.

Len was with their group. He drank a large ale that was the same red-brown color of his skin, then ordered a second. “It turned out better than I expected,” he said. “The mat disassembled to attack us. Did you hear that?”

Lydia nodded.

“The parts, the ribbons, apparently lost whatever made the mat go after us. Intelligence? Anger? A memory for past harm? — That’s what the rescue team

told us, anyway, and there was a marine biologist with them. The moment the napalm hit, the ribbons left, just slithered into the ocean and swam away.”

What had the mat lost when it divided? Lydia wondered. Memory? The ability to plan? Malice? Would the parts rejoin? If so, would the mat remember its anger and know that it had failed?

This is speculation in the absence of data, her AI said. True.

The crew members described what it had been like inside the Persistent, as the ribbons enveloped the ship and it rolled over, lying sideways in the water. There had been leaks, none dangerous, and a

fair amount of damage to things that hadn't been properly fastened down. "We weren't sure how long we'd be trapped," said Len. "So the captain was hoarding power. Is that the right way to say it? Your humanish is close to our English on Earth, but not identical."

The corridors and rooms had been dimly lit, the air warm and barely moving. They had eaten cold rations and listened to ribbons slapping against the hull.

"All's well that end's well," another crew member said finally. "Though the government here expects the AIs will order everyone off the planet. That may not be a happy ending."

Lydia took another walk on the breakwater. Once again, it was sunset, and the kids were whizzing back and forth on their bikes. Whitecaps dotted the ocean. A fair distance out, K'r'x breached, his huge body rising out of the water, fins spread like wings.

“Wow! Wow!” a kid cried.

Lydia put on the headset and told him where she was, then scrambled down over the breakwater's broken stones, stopping at the water's edge. He reached her soon after, a long pale shape gliding just under the surface. Above her, she heard the kids' shrill, excited voices. He paused in front of her, water washing over his back, his fins rippling just a

little at their edges. His tentacles were curled up around his mouth. His frontal eyes regarded her, and she, looking through his eyes, saw herself: an odd, tiny, alien figure.

At the same time as she looked at herself, she looked at him. This close, she could see the marks the disks had left on him. Still round, they were dark green now, the unpleasant hue of aging bruises. They dotted his body and fins. The rescue team said I should go to Fish Fjord. There are biologists there who can treat my injuries. I wanted to say goodbye to you first, Lydia. He uncoiled a fingered tentacle, extending it toward her. She took it. The cold, wet, boneless

fingers gripped her hand firmly. In his mind, she felt fatigue and loneliness and affection.

Do Divers do this? she asked.

Entwine tentacles? Of course. We are a tactile species. Though this is the first time I've entwined tentacles with someone who did not belong to my species.

If you get tired of your home, get in touch with me, she told him. I'll talk to Stellar Harvest. They might want to hire you. I thought your actors were human or humanoid. Mostly, yes, Lydia said in her mind. But the company knows the galaxy is full of many kinds of intelligent life. If

they use only humans, they are showing a version of the galaxy that is obviously unreal. So they use non-humanoid actors, usually in supporting roles. You might have to start as a villain. I, who have always kept my posture level and swum straight forward, never turning to the side?

After a moment, Lydia translated this: “I, who have always been upright and sincere?” His mind did not feel affronted. He must be joking, she decided, though she suspected he was upright and sincere. I will consider the possibility of a career in drama, K’r’x added. After I have become bored with home.

She sat for some time, holding the Diver's hand. A couple of kids came down finally. "Will it shake hands with us?" asked the girl.

"K'r'x is male," Lydia said. "You should call him 'he.'"

"Okay," said the boy.

Lydia relayed the request to K'r'x. He complied.

"He feels ishy," the girl said.

"He's a guest on this planet," Lydia said. "A member of a scientific expedition. Treat him with respect."

“My mom says we’re going to have to leave,” the boy said.

“His mom is the mayor,” the girl added.

“Because of the expedition,” the boy continued. “The scientists screwed up, and now the AIs are mad at all of us. Are you a scientist?”

“No,” said Lydia.

“Is he?” the boy asked, waving at K’r’x. The Diver was moving backward into deeper water. In her mind, Lydia heard him say, Human skin feels so odd.

“No. He and I were on the expedition, but only as hired help.”

“That’s good, I guess,” the boy said.
“Do you know what will happen to us?”

“The AIs will help your families find another world,” Lydia said. “And you will settle on it.”

“It won’t be the same,” the girl said.

That was certainly true. Lydia could think of nothing comforting to say. Change is inevitable? The galaxy is full of planets as lovely as this one?

Neither remark seemed useful at the moment.

K’r’x lifted a tentacle, this one covered with spines, waved farewell to her, and

dove.