

The Reef Builders

"The great thing about diving is the extra dimension," Burt said. "Picture yourself at the center of a circle. That's your life on solid ground. You can move in all variations of forward or back, of left or right. North, south, east, west. But underwater, the circle becomes a sphere. Infinitely more possibilities. Your brain expands accordingly. That's only natural. It explains the high degree of cortical encephalisation in dolphins. Freedom drives cortical development. Which in turn drives the creation of more previously unimagined possibilities."

Burt was an American, a surfer, gay, and a believer in the supernatural. He was remarkably open about all four aspects. In a subtle way, in a clever way, Cynthia thought, he was in the process of defending each of these. As an added bonus, he was being a pain in Mark's thick neck. Mark was an engineer from Perth. The ostensible topic of conversation was ghosts. Burt had once seen a ghost while diving off the coast of South Africa. The ghost was male, naked, and had a cement block chained to one foot. Race unidentifiable. His hair had been long and streamed upward like seaweed.

"There are scientific explanations for underwater dementia," Mark said.

"Nothing to do with freedom."

"The thing is. . ." Burt was getting really excited now. A salty line was developing on his upper lip, he slammed the table with the heel of his hand. ". . .The thing to remember is that up until the time you begin to dive, you don't even understand how limited your choices have always been. You've never even thought about it. Your little life."

"Birds," said Mark.

"Excuse me?"

"Low degree of cortical encephalisation. Bird brains."

"Of course, the raw potential must be there. I thought that was understood. You might as well say guppies."

Mark and Burt were always on at each other about something. Mark was a flaming hetero, but there was a sexual tension there of some sort. Not the obvious. Something more complicated. Cynthia would need weeks to pick it apart. She would need lots of private time with each, lots of unguarded conversation about families and adolescent dramas. She doubted her interest would hold up that long. Best not to even start.

When Burt brought his hand down, he squashed a number of ants. Cynthia was the only one to notice. She had become more partial to ants since joining the team. Ants were builders, too. You could see an anthill, if you chose, the same way you could see a coral reef -- an oasis of life. Admittedly a less symbiotic one. Ants looked after ants and damn the rest of us. You couldn't call them selfish, they didn't think about themselves at all. Nationalistic, maybe, but you couldn't hold that against them. Especially not when they were dead. You had to see the pathos. Moments ago they had been foraging over the gouged and sticky table. They were very organized, their patterns geometrical. Nature expressed herself in many ways. Chaos and riot. Lines and crystals.

Unrestrained and inadvisable growth. Cautious exploitation. The heel of someone's hand. Burt and Mark. Cynthia finished her coffee quickly, although it was too hot for this, and left the breakfast table. Surprising that Burt would have forgotten about the birds, even for a moment. The team was surrounded by them here on the reef. Birdshit poured out of the trees, like oobleck, Burt said, and then had to explain what that was. Someone was always being shat upon. The din was constant. At night it was the mutton birds, howling and sobbing like lunatics. The mutton birds burrowed and slept during the day, silent and invisible, but they were spelled by the noddy terns. In fact there were many reasons to dive. The island smelled of salt. Today, like yesterday and every other day, would be hot and sticky. No showers allowed until five pm and even then the water so rationed you couldn't enjoy yourself. Everywhere was rust and corrosion. You always had the taste of salt on your tongue, you could feel the salt on your face. Just rubbing your hand across your skin could scratch. Salt in the air made your laptop stutter. Cynthia loved it. Salt was her element. She was the most experienced diver on the team.

She picked her way to the bathroom. The path was littered with the dead husks, the exoskeletons, of diving equipment. She passed Junco coming out of the bath, dressed in her bathing suit, a blue sarong around her waist, salt whitening the corners of her mouth. Junco was from Kyoto.

"Helicopter today," she reminded Cynthia. Her tone was celebratory. They all knew what the helicopter meant. Imogene, the pilot, would bring them pizza from the mainland.

Junco thought about food all the time. It was an occupational hazard. Junco was their expert on bleaching. In return for protection and housing, dinoflagellate algae named zooxanthellae provide the food coral cannot produce. Like Imogene bringing pizza. They also give coral its color.

Bleaching is when the zooxanthellae die.

In some years, bleaching events occur nearly simultaneously all over the world. Junco believed the

cause was the el nino effect, though she would have been the first to identify this as an article of faith. It didn't bother Mark the way Burt's ghosts did. "Unproved, but probable is an necessary scientific category," he said, though with the air of extending a favor, which would have irritated Cynthia, but made Junco laugh. Cynthia credited Junco's endless supply of good will to the way she looked. Even Burt, who should have been impervious, behaved better around Junco. Beauty worked that way.

Beauty worked in other ways, too. If Junco had merely been beautiful, someone at sometime, with no further evidence, would have suggested that she had slept her way through an advanced degree. But Cynthia had never heard this said. Maybe it was because Junco could go on about zooxanthellae until your eyes crossed. Maybe it was something less easy to define. When the noddy terns shit on Junco, it was charming. It was a tribute. On the rest of them, it was birdshit.

Sent By:Karen Joy Fowler on Tuesday, March 4, 1997 at 12:13:04.

Cynthia spent a long afternoon in the water. Diving here was so perfect that it almost wasn't fun. The water was blue and utterly clear. They were rebuilding the reef. Part of the project involved cloning coral. After they lay down the coral, they were seeding it with zooxanthellae from Jamaica that was more resistant to temperature changes and therefore, theoretically made the coral less susceptible to bleaching. Cynthia was working on the edge of a huge bleached area. Dead, unpigmented coral stretched away from her along the reef line. A coral necropolis. A city of stone bones. It should have been horrifying, but instead it was beautiful the way ruins are. The zooxanthellae couldn't be seeded in the dead coral but the idea was that seeding along the edge of the dead zones would create a protective barrier. The zooxanthellae was in a gel medium that she squirted out of a plastic tube with a squeeze bulb. The gel hung in the water, faintly obscene. She'd knocked her hand against the coral and had a bit of a nasty red cut but one nice thing about her work was that she was constantly soaking in seawater. It stung, but it wouldn't get infected. The reef was full of movement. Octopi, smart as house cats, lurked in mottled camouflage. A nurse shark was gliding up the reefline. Nurse sharks had never been known to attack humans and Cynthia usually liked them. Today it struck her as too solitary. Not social, like ants and coral. Streamlined and smooth. Not fractal. No edges. Predators were elitist.

The dive team got back just before the helicopter came in. Imogene the pilot brought strange pizza with tiny octopus laying in curlicues. She brought pepperoni and sausage pizza, too. Burt didn't eat seafood pizza. "It's got octopus on it," he said.

"I like octopus," Mark said.

"Eating octopus is like eating a cat or a dog," Burt said, gesturing at the pizza. "Do you know how smart an octopus is?"

"Do you eat pork?" Mark asked.

"No," Burt said. He was picking the pepperoni off his pizza.

"Pigs are as smart as dogs," Mark said, but the point was lost.

"Even if it didn't have octopus on it," Burt said, "I only eat deep water fish." He told about the time he'd gotten ciguatoxic poisoning from a fish dinner in Cuba. Ciguatoxin was produced by microscopic creatures that lived around coral reefs. Reef fish ate the creatures but for some reason they didn't get sick.

"Did you see your ghost before or after you got food poisoning?" Mark asked.

Burt stopped. "I can't remember."

Junco laughed and everybody at the table smiled. The Junco Affect. A little El Nino right here at the table, Cynthia thought.

"There are neurological effects," Mark said.

"Not hallucinations, peripheral nerve damage in some people." Burt said. "Besides, I saw the ghost before."

Cynthia had had seafood pizza in Hong Kong working on a project laying fiber optic cable for Nynex. She preferred the pepperoni but not eating the seafood pizza might be seen as taking sides. She took a slice of each. She had decided to stay neutral. She always got interested in what was going on between people and it always left everything so complicated. Glances became thick with connections and people's bad behavior had to be explained by their childhood. Not that she would remain aloof. She would be companionable.

After dinner they all wandered out to look for weather. Cynthia was barefoot and the uneven and sandy ground felt good between her toes. The storm was too far out to be seen but the waves were high. Burt was talking about surfing. Mark stood beside her. Cynthia sat down and brushed something prickly off the bottom of her foot and Mark looked down at her and smiled. She smiled back. Friendly. Companionable. Ant to ant.

Mark sighed heavily. It was the sign of a man with a lot on his mind. Someone looking to talk to

someone. She was resolute. Oblivious. She sat in a way she felt communicated friendship and companionship but no invitation to confidence.

"Are you busy?" Mark asked.

What was there to be busy about? "No," she said.

"I'm thinking that maybe I'm getting too old for this," he said quietly so that only she would be in the conversation. The others heard his tone and politely shifted away.

She sighed.

Sent By:Maureen F. McHugh on Friday, March 7, 1997 at 09:06:21.

Cynthia pointed to where long lines of noddy terns, thousands of them, streamed back to the island from their long day fishing out at sea. "I'll never be too old for this," she said. The noddy chicks screeched from the trees in signal to their parents, "Hey, here I am! Bring food fast! Octopus pizza! Pre-digested!" The noise was deafening.

"Birds and stuff?" Mark looked vaguely up at the sky. "That's not what I mean."

Uh-oh, thought Cynthia.

"I didn't want to tell you in front of the others, not just yet, not till I'm sure."

"Mark, you don't have to . . ."

"It's like this. It's seriously weird. That machine I'm testing, the growth rate monitor. Crap results! I just keep getting crap results."

"You mean work? You're talking work?" Cynthia relaxed back into the sand. A heady whiff of coral cay rose from her lightly digging fingers. So this was the best Mark could manage in amorous mode. If this was amorous mode. Cynthia laughed.

"It's not funny Cynthia! It's all very well for you. You've got Nynex money. And Junco. She just smiles and NASA gives another grant for good old El Nino. Global change, global megabucks. But they don't have that kind of money in Perth. All I've got is this crappy seeding grant, and I have to get results, fast. Results that mean something."

"What's wrong?"

"I can't get any sense out of that machine! I've stripped it down, checked the seals, given it a new counter, what more does it want? And still it's messing me around! The growth rates! Coral just doesn't grow that fast. Not half an inch in one week!"

"Checked the computer end?"

"Of course I've checked the program!"

"What if it's true? Half an inch a week?"

"Can't be!"

"Yeah. Sounds really off to me."

"I'll rig the monitor with some of the spares Imogene brought. But if the counter's stuffed, really stuffed, then all our work will go for nothing."

Big trouble, so early, thought Cynthia. And only she guessed why. If Mark knew what Cynthia knew, or thought she knew. The Nynex report. Cynthia chose her words carefully. "Mark, you are so right to tell me. Just me. Check it out first. Before you wreck Junco's cool." If Mark was to know what Cynthia suspected that Junco just might know. If Nynex knew what NASA suspected. Cynthia's brain approached burn out.

Mark hadn't finished. He was like a puffer fish. Disturbed into motion, he continued to puff up to maximum indignation. "That Burt's been messing with my laptop. You saw him, this morning."

Cynthia remembered. Burt had logged off fast when he saw them. "Just installing Doom," he'd quipped.

Mark had grown very white about the eyes. "Don't you ever even think of it," he ripped into Burt.

"Only joking," said Burt. He'd left the mess hut fast and jogged off to the beach.

"I'll go in and change the password," said Mark, rising to his feet. "Now."

When Cynthia was certain she was alone, she took out her flashlight and shone it on her hand.

Where that morning the coral had cut into her finger, where tonight she might expect, despite the disinfectant, a nasty red streak from zooxanthellae toxins, instead, there was nothing to be seen. Her skin had completely healed. She'd been troubled by the fact for some hours now.

That night Cynthia slept badly. Giant coral polyps invaded her dream landscape, clone pitching battle with neighbouring clone, red colony with orange, yellow with purple. Huge filaments of protoplasm swept the lagoon, slurping up everything in their path.

Suddenly Cynthia was wakened by an extremely peculiar noise.

Sent By:Rosaleen Love on Tuesday, March 11, 1997 at 19:34:44.

She opened her eyes. There it was again: a low, deep, grinding, more a vibration than a sound. It seemed to be coming from the bed, the walls, the floor.

Could this be ...?

Blinking hard three times, as if to clear her head of a nightmare, Cynthia sat up. She slept in an oversized "Reach Out and Touch Someone" tee shirt; she stepped out of bed and pulled on her jeans. She heard a scream.

She ran to the window of the quonset that doubled as the project's mess hall and dorm. Her fingertips on the sill told her that the room was shaking; the corrugated roof was rattling overhead. But the night sky was clear.

Outside, the lagoon was smooth as glass. The threatened storm had died and the sky was awash with unfamiliar stars.

SSSSKRREEEEEEK!! SSSSKRREEEEEEK!!

It was the noddy terns. Something had awakened them. They had panicked the mutton birds, which were sobbing and walking in circles on the sand. Then both species rose in a thrumming cloud of wings and abandoned the island, their sobs and screams fading in the distance.

Silence flowed back in, a dark tide--and underneath it, the low grinding sound, like the hull of a ship on sand. Cynthia could feel it through her bare feet.

It sort of tickled.

She looked down. The plywood floor was crawling--literally--with ants. Also walking in circles. Shit! Cynthia snagged her flip-flops with her toes and closed the door of her room behind her. She hurried down the hallway, glancing into the other rooms.

Empty.

Empty.

Empty.

The panic she had fought down so determinedly rose in her throat; her heart was pounding. Maybe not, she whispered like a prayer. She forced herself to walk, not run, through the shabby "rec room" of the quonset and out the door; past the empty copter pad, down the bumpy path to the lagoon. The coral sand was almost bright in the starlight. Toward the horizon the reef boomed with unseen waves. Cynthia walked until she saw the shapes at the water's edge--then hurried.

Even in the dark she recognized the two familiar silhouettes: one hip shot and lithe as a bird or a girl; the other thick-necked and compact, squatting at the water's edge.

Burt and Mark. But where was Junco?

"It's the reef," Burt said, before Cynthia caught her breath.

"The reef?"

"It's moving."

"Say that again."

"Bloody fucking on the march!" said Mark. He clicked on a flashlight and Cynthia saw that he had reeled in the growth rate monitor. He wiped the dripping LCD screen with his tee shirt. "You know, busting out! Running away."

"What about the dead coral?" Cynthia asked stupidly. She looked from Mark to Burt to Mark again. She was beginning to feel like a noddy tern, disoriented.

Panicked again.

"It's the dead coral that's moving," said Burt. He pointed out across the lagoon, toward the reef. Mark stood up, dropping the monitor onto the sand with an expensive thud. "I don't need this bloody thing. I can fucking watch it grow from here!"

"It's the dead coral," said Burt. "Somehow it has come back to life. And started to move."

Cynthia shook her head. "But that's not ..."

There was a splash ten yards out. Junco stood up like a short-haired Venus, dripping, dressed in scuba gear and nothing else. She hadn't bothered with her suit. She wore a long gash on her right thigh like a red scarf.

She was as beautiful as ever, but the easy charm was gone. She strode angrily out of the water, snatched the flashlight from Mark, and shone the beam directly into Cynthia's face.

"I think you have some explaining to do!"

Sent By:Terry Bisson on Friday, March 14, 1997 at 10:19:02.

"I don't know what you mean," said Cynthia. This was a lie, of course. She knew exactly what Junco meant, but she was surprised by the intensity of Junco's anger. She raised a protective hand to her face. Cynthia had become more sensitive to light, and right in her eyes like this, the beam was so bright it hurt. Behind the painful glare, Junco's naked body floated like a ghost, above it the insect-like scuba mask and snorkel.

"I checked the grids," Junco told Burt and Mark. She gestured wildly, ripping the mask from her face. The flashlight beam danced over their faces, the water, the trees, and settled onto the sand at Junco's feet. "The growth is all in Cynthia's sector. There's no way she could have missed it."

She's known for days."

Mark had designed the new extension of reef on a foundation of concrete blocks. At intervals he'd driven steel stakes to form grids; a photographic history of the grids was to have been one of their methods of measuring and documenting growth. The first photographs after the base round were scheduled for a date still five months away.

"So the question remains. . ." said Mark. He sounded so angry.

"Why didn't you tell us, Cyn?" said Burt. He sounded so hurt.

There was a long silence. An odd silence. Cynthia took it apart piece by piece. The water was quiet because the reef growth had now made a bay of the beach. No more surfing here for Burt. The birds were quiet because they'd flown off or gone to ground. The reef was quiet because it was resting or maybe it was finished. Maybe it had become whatever it was trying to be. The people were quiet because they were waiting for her to talk.

"The coral is coming back to life," Cynthia said. Maybe they'd settle for the obvious. She understood that they were upset because they were surprised. She had been surprised herself until she'd had a chance to really think it through. Then she'd been excited. The others just needed the same time to process it. "Twenty years from now, maybe sooner, -- we were going to lose the reefs. You know that. We were losing. This is a victory. Our victory. Our team. We're coming in ahead of schedule. We're putting things back the way they're supposed to be. What's wrong with that?"

"I can't explain it," said Mark. "That's what's wrong."

"Burt," said Cynthia. She knew Burt couldn't feel that way. "Tell them about the medical potentials of the reefs. Our relationship here is symbiotic. They're no threat."

"What's wrong is that you didn't keep us informed," said Junco. "I imagine there's more you aren't telling us."

"Burt!" said Cynthia.

Burt wouldn't meet her eyes. He stood, and he had a towel in his hands, which he draped over Junco's shoulders. Junco shook it into place.

"We'd better look at her data," Burt said.

"I'll give you the data."

"Just give us your password. You're off the team now." That was Junco, wrapped in her towel like a queen in her robes.

"Go for a dive or something," Mark told Cynthia. "Don't slam the door on your way out." He reached over and took the flashlight back from Junco. The flashlight beam stroked quickly down Junco's thigh and then onto the path. In that moment, Cynthia could see that the gash was already healing.

"Burt!" said Cynthia.

"Just give us your password, Cyn," Burt said.

Sent By:Karen Joy Fowler on Thursday, March 20, 1997 at 09:53:17.

"It's THX1138," Cynthia said. All the password would give them was her schedule for seeding the reef and some tables for animal population surveys. She studied her hand, the unmarred surface of her skin and the way the tendons shifted when she moved her fingers. Off to the west, storm clouds were blowing across the stars. She looked for the Southern Cross. It was the only constellation she knew to look for in the Australian sky and all she had was a vague sense that it was a diamond shape. The sky was full of unnaturally bright stars for her light sensitive eyes.

Mark stomped up the path, mercifully taking the flashlight with him.

"I can't believe you," Junco said and followed him.

That hurt, from Junco.

Burt waited. "What else, Cynth?" he said softly. "What else can you tell me?"

"It's communicating," she said. "That's what coral does, you know. All those worldwide bleaching events, it's all linked." She needed to be down there, diving in it. She took a step forward, and then another, until the water lapped over her feet and the sand eroded beneath them, covered them, holding her there at the water's edge.

Burt came and put his hand on her shoulder. He was seducing her with friendship. She knew, she knew the whole game; didn't he realize? She was the one people confided in. She knew all about sympathy at the right time.

"It's all primate grooming behavior," she told him. "That's why we react to a touch the way we do. Coral touches all the time, and almost never touches; each organism locked in the little prison of its stony cell, reaching out to feed. So how does it communicate? But it does, and not just with its neighbor, but with coral reefs off Jamaica and in the Arabian Sea."

"Your skin is hot," Burt said. "Are you all right?"

"Weird tropical diseases," she said. "No, really, I'm okay. I'm just, I just thought everybody would be pleased. The reef's growing. If anyone should be pleased, it's you."

"What's going on?" he said softly, insistently.

"It's a communications network," she said. "I told you."

"Is it NASA?" he asked.

She laughed. "Junco has the NASA grant, not me. You know what they say about solving a crime, follow the money." She felt light-headed and distracted. "I'm going diving," she said.

"I don't think you should," he said.

"I don't think I have any choice."

He grabbed at her arm but she could see better than he could in the dark and it was easy to slip away and skip up the path while he bumbled after her.

Burt flicked on the bathroom light and it flooded out, making the dive equipment cast hard-edged shadows.

"Cynthia!," Burt said. "You shouldn't dive alone. You shouldn't dive at night. I think you've got some kind of fever."

"Did you know that blood responds to tides?" she asked him. She knew it made her sound crazy and a little delirious, but it also made avoiding explanations easier.

"At least let me go with you," he said.

"Aren't you going to go check my results?" she said sharp. She was surprised at how angry she was. After all, in some sense they were right.

"Who is it? Is it the U.S. government?"

"It's the CIA," she said, just to see how he'd react and of course he believed her. She could see him taking it in, trying to reassess her as the kind of person who would work for the CIA. All sorts of emotions worked in the small muscles of his face. "Goddamnit," she said, "you'd believe anything. It's Nynex. They're big in basic research now, trying to compete with Bell Labs and Lucent and all the rest of that."

"Nynex?" he said.

"Yeah, Nynex. The people who brought you phone service. Sometimes I dive for them. They have a division laying trans-oceanic cable and they use dive crews where the cable comes ashore. So they hired me for this." She checked the tanks. "I need my goddamned watch," she said.

Burt looked stricken. A mutton bird moaned and the silence ended.

Sent By:Maureen F. McHugh on Tuesday, March 25, 1997 at 15:17:02.

Or was it a mutton bird? The wail was like that of a cat growling in low terror, or a baby bereft of all comfort. The moans came from deep in the burrows of the earth, under the casuarina trees where the mutton birds nest. But it could easily have been the groans of Gaia signalling an abrupt new shift in evolution.

Cynthia listened and tried her best to understand. Why had she just told Burt all that stuff? When it was only part of the story? Cynthia brooded. There was so much sheer chance in all of this.

What if things had once been different? What if bears had been the ones to discover fire? Back then, aons ago, at the beginning of the Quaternary. What if apes just lolled around the savanna, taking in the sun, while it was the Syrian bear that took it into its furry head to warm its cold cave with fire from the volcano? What if it was the bears that led to us? Cynthia would be a hu-bear, that's what, and a solitary creature, going her own self-centred foraging way, a hu-bear in a diving suit, hairy and big of paw.

Burt was rapidly suiting up. He wasn't going to let her go alone. Burt will see what she sees, know what she knows. Burt will see through her eyes, her mind, her tendrils, her polyp frills, her streaming protoplasm. Corals are social organisms, like apes, but not like apes. Corals have connection. The social bit, that's what made apes take up the call and tear away. Bears, the solitary foragers, got left behind.

Burt snapped some fluorotubes and handed them to Cynthia. He was silent, attentive, as if at last aware that Cynthia had moved way beyond his counsel now.

Cynthia clipped the glowing tubes to her belt. Punctuated equilibrium. The punctum point. Their equilibrium has been punctuated, these little coral animals, their status quo has been upset.

Nynex fibre optic cables, self-organising, self-duplicating, self-burrowing through the ocean floor all the way from Hong Kong. Connections. Always connect, calls waiting with calls outgoing, automatic teller machine with automatic teller, this dimension to all others.

The sea is full of artificial things if you know where to look. Cynthia knew a Nynex cable when she saw one.

It's like all the automatic tellers in the world can talk to each other, and it's as if they're starting to talk to us. They've reached a certain point of emergence when a new complexity arises, swift, energetic, totally new. Their robot teller equilibrium has been punctuated, their status quo upset.

They'd take that leap, wouldn't they, the way the apes took it and the bears didn't. The automatic tellers would start telling us non-automatic stories. They'd start off small, perhaps, just dispensing financial advice, then they might move up to life-s kills counselling, whatever. If their intentions were benign, that is. But if their intentions were quite otherwise, they could slurp up all the money in the universe. As coral extrudes a mesenteric filament to slurp up any newcomer that anchors itself to o close. As Cynthia extrudes her filaments to latch onto Burt and draw him along with her.

The intentions of the group mind, though, could be otherwise. If not human, then no intentions either for good or evil. Point of being human, having intentions. If the Voyager space probe went out and came back again, with a form of alien life on board, w hat if . . .a story she'd read surfaced in Cynthia's head. The point of being alien was being alien. Humans, how would they know how to listen? You'd have to learn to listen, have to know the codes, of silence, of response. What if the being was one, yet many? As in this patch of sea. But coral is life on earth. Coral has co-evolved with humans. Coral has been biding its time. Coral can connect. Whispers. Coral whispers. Cynthia listened carefully. Then she motioned Burt forward into the deep unknown.

Sent By:Rosaleen Love on Wednesday, March 26, 1997 at 22:49:13.

Cynthia swam expertly and fast, knowing that Burt could keep up with her. They were all at home in the water--Mark and Junco, Burt and Cynthia. But she and Burt were the best: American kids, scholarship swimmers.

Two of a kind.

The lagoon floor was eerie and mysterious in the light of the flouro tubes. Enigmatic ripples, tracks in the gray sand, swiftly passing shadows.

Then, there it was: the reef. Or what had been the reef. Dull gold in the neon glow, it had left behind the rods of the grid and rearranged itself in two parallel lines, each about a foot wide, heading out toward the deep water like a country road.

Cynthia swam back and forth over the lines, and Burt followed, nose to heel. It was almost fun: an ancient dance they both knew deep in the bone.

Then they swam side by side just under the surface, back toward the innertube-sized buoy that marked the shallow end of the grid. It was a place to rest.

Cynthia swam up under it, and broke surface.

The stars washed over her like spray.

"What the hell was that?" Burt spat, surfacing beside her.

"Glory Road," said Cynthia. "Look, it's no secret that I've been working with Nynex. I've admitted as much. What I haven't been forthcoming about is exactly what we're doing. Glory Road is a cold-water directional linear-growth binary full-duplex supe rconductive coral. Cable that lays itself. My own design. But it's supposed to take months, even years, to grow. Something else is going on." Burt gulped almost fetchingly; then nodded. "Something is," he said. "Me."

"You?"

"Hyper-Glaxxon, rather," he said. "A medical conglomerate out of Singapore. They paid my way through Cal-tech."

"Thought you were a jock."

"That was a cover."

"And Jamaica?"

"That was a cover too. The zooxanthellae is a hybrid, cloned from human fetal tissue. The idea is, if it can feed coral it can feed bone. And if it can be farmed, it will be worth billions. But of course, it's illegal as hell . . ."

"So you're here under deep cover," finished Cynthia. "Me too. Glory Road has to be tested close to shore and I'm trying to avoid sovereignty hassles."

"So what have we created?"

They both smiled. It was a curiously intimate moment, treading water, shoulder to shoulder.

Cynthia felt almost as if they were lovers, discussing their firstborn.

The spell was broken by a sharp, loud, ugly crack from shore.

They both looked back toward the quonset. "What was that?" Cynthia asked stupidly. She knew damn well what it was.

"A Glock nine," said Burt.

"You can tell from here?"

"I saw it in Junco's bag."

Sent By:Terry Bisson on Thursday, April 3, 1997 at 16:39:38.

How annoyingly histrionic. How self-centered. How very homo-sapiens.

Cynthia finned her hands through the black water. If Junco thought to rattle her, Junco could think again. "Junco is developing a real bad attitude." She couldn't understand this. How could anyone side against the coral?

Burt shook his head. "Improper cortical encephalisation, and who would have thought it? She seemed so nice. Maybe I should go in and talk with her."

"Let Mark deal with it."

They heard another crack, followed by a splash. "She seems really upset," Burt said. "She's coming out here. Let me go calm her down. Give me fifteen minutes and then you come in."

"You know how, in a monster movie, there's always one scientist who says 'Maybe we can reason with it'? That's you, Burt." Cynthia was feeling especially fond of him. She wrapped a restraining hand around his wrist. That scientist was always her favorite. Too bad he was never around for the end of the movie.

"And you," said Burt, "are the creature from the Black Lagoon. I mean that in the nicest possible way." Burt reinserted his mouthpiece, sucked it into place, and removed her hand. He then sank slowly away. Cynthia watched him melt from the neck up until he was nothing but a trail of bubbles.

She felt oddly unconcerned about whatever was happening on shore. Burt would fix everything. Anyway, her team wasn't there anymore. She was on another team now. She decided on a free dive, no air, no weights, no lights. She hadn't done that often at night, but a free dive had such purity. It would wash away the taste of Junco's Glock nine and Mark's fingerprints all over her computer data. She slid out of the tank and let it and the bc settle onto the buoy. She dropped the fluorotube onto the reef. The water felt warm compared to the air. It slid along her arms and legs, a perfect fit no matter where or how she moved through it. Like skin. She heard another crack and then she dove. The water was so clear she could see the stars through it, pulsing larger and smaller as the water moved, as if the stars were breathing.

She stroked out toward deeper water. Fish flickered around the light on the reef, the seaweed snaked and streamed like grasses on a windy day. Cynthia pulled herself farther down. Her leg brushed something solid and she twisted to look, but whatever it had been moved faster than she could. She pulled herself deeper still.

And then there was an explosion. It must have been underwater, because it hit Cynthia with such force her ears could not recover from it. The water was filled with sand and bits of debris so Cynthia couldn't see any better than she could hear. She gasped toward the surface, the air coming out of her lungs too early, so that she ached from head to toe by the time she could breathe again. She spent a moment, draped across the buoy, filling her lungs.

Burt. Burt's air tank. As soon as she could, she swam for shore. She crawled and kicked as fast as she was able, but it would never be fast enough. She had an image of a ghost, floating in full scuba gear, casting its shadow like a hawk over the beautiful, chiseled, bricklike surface of the new reef. Her feet touched sand and she could already see that something large and limp now rolled, first this way and then that, in the tiny waves by the beach.

Sent By:Karen Joy Fowler on Friday, April 11, 1997 at 10:15:29.

That crack again and something hit the water close to her. Reflexively Cynthia ducked under water. Damn it, according to the movies, Junco was now supposed to explain her mad scheme, and Mark or somebody was supposed to come and stop Junco at the last second. Poor Burt. Sweet Burt. If he was still alive he needed help.

Still alive? some part of her mind wondered. Shouldn't she be more upset about this still alive business? Or about this probably dead business, more like it? Cynthia couldn't get in close to him without Junco seeing her and shooting her.

She stuck her head above water. She could make out Junco standing, feet apart, with the Glock in one hand and the other steadying her wrist like someone out of a movie. She could see Junco pretty clearly, although obviously, Junco couldn't see her. Didn't Junco realize that they were both part of the reef? Obviously not. The reef had cut Junco's thigh but it hadn't started working in her yet.

Junco had gear on and a tank at her feet.

Cynthia figured she didn't stand much chance on land. (How prettily her mind worked. Everything seemed so clear. Was that adrenaline? Hysteria?) Big chase scene coming up. The scientist had gone to talk to the monster, the monster had eaten the scientist, and now it was time to lure the monster into the electrical lines.

And Cynthia's own gear was out at the buoy.

She went under water again, twisting and turning like a seal and the muted sound of the Glock came

through the water. Junco would figure it out, there was nowhere to go but the buoy. Junco would follow her, and then they'd swim it out in the coral. Cynthia was the best diver on the team. Burt had been a good diver, but Junco, while lovely in the water, was merely competent. And out there among the coral, Cynthia would be at home.

Of course, thinking about the movie scenario, there were some drawbacks. Junco was the beautiful one, not Cynthia, and hadn't Burt said Cynthia was the Creature from the Black Lagoon? Did that mean that Junco was supposed to win? She dolphined, which was hell on the back but the fastest way to swim under water. When she had to she surfaced and looked back towards the beach. Junco had come down to the water's edge and was looking but she was looking up and down the beach.

Still a long way to the buoy. But she couldn't let Junco stay there on the beach.

She tread water for a moment. Then she called, "Burt? You okay?"

Sent By:Maureen F. McHugh on Monday, April 14, 1997 at 14:43:07.

But it wasn't Burt or Junco who first came in answer to Cynthia's call. Dead damsel fish floated in a soft blue belly-upwards cloud past her half-submerged ears. Dead fish, slap in the face.

What was it with her? How could she feel so remote from Burt's fate? Poor Burt. All those questions she'd left unasked, about his Mom and Dad, his adolescent angst, about Hyper-Glaxxon.

Yeah, Hyper-Glaxxon especially.

Another crack from the shoreline, another splash near Cynthia, far too close. Junco was too damn good at what she did, whatever team she was on.

But what was the other noise, not-quite a noise, something seeping out from underneath the soft plop of the water? A gentle soft shushing sound, a near-subliminal burbling, coming closer, closer, near-words, half-heard, half-sensed, "Peace, Cynthia, all is not as it seems, there are many dimensions, many sides to this alive-dead business. Hush now, don't call out. We're coming for you. The time for waiting is nearly over. Glory Road will take you where you want to go."

Underwater madness. What was it Mark said? You hear ghosts. See voices.

"Cynthia!" came a soft whisper, this time more or less human. There, bobbing up in front of her, silhouetted against the first faint streaks of the new dawn, was Burt. He raised his hand, forefinger to thumb, in the buddy OK sign.

Cynthia swam towards him, a huge grin on her face. "I thought that was you exploding! I thought it was your tank going up!"

Burt was not alone. He gestured behind. Cynthia saw a large limp object. Mark! Burt was towing Mark! "I took him away from Junco. He's safer out here than near the land."

"You reckon?" Mark looked very peaceful, far too peaceful for Mark, lying there belly upwards, eyes open, staring at the sky. "Burt, don't you think he's looking just a little bit dead?"

"What's 'dead?'" asked Burt.

"Burt! Remember? Underwater dementia? Something's happened! We're both off our heads!"

"You saw what the voices said." Burt waved towards the buoy and swam off, towing Mark.

Cynthia knew it. Death, life, what's the difference to a colonial animal? Death is merely the urge to clone itself, to bud little polyps off the end of filaments and send them floating out into the world.

They shouldn't have done it, Cynthia could see that now. Coral can clone itself perfectly well. It didn't need humans to give it a shove along. Who would have guessed that Glory Road would lead to this, that cold-water uni-directional linear growth binary full-duplex superconductive coral would turn intelligent on them? Would say, great, now you've nudged us along that next step up evolution, thanks a million, but now it's good-bye, and thanks for all the fish. Humans, you're done, like the dinosaurs, and you did yourselves in.

The Quaternary period in earth's history was ending, just like that, and the Quinary was about to begin, and soon words will be something she won't care about any more. Quaternary, quinary, what the heck. The Quinary period is starting as of right now, and the corals are in control.

What did they expect Cynthia to do? All she could do was swim along after Burt.

"Hey, aren't you going to wait for me?" A faint voice called from the distant shore.

Sent By:rosaleen love on Tuesday, April 22, 1997 at 09:55:38.

It wasn't Junco's voice.

Cynthia stopped swimming and treaded water, straining to hear. "Aren't you going to wait for me?" the voice called out again.

It was Imogene! Kicking to raise herself as high as she could in the water, Cynthia saw the insectile silhouette of the little 444 on the heli-pad, the rotors still slowing. So that was the shushing not-quite-noise she had heard; the mysterious voices.

Dementia. She was as nutty as Burt. Somehow, the realization reassured her.

"Imogene! Look for the dinghy!" she called. "We need a boat. We need help!" In answer Cynthia heard the cough-cough-snarl of an outboard starting. She turned and swam toward the buoy. The water was gold, lit from below by the glow of the doctored coral. The promising coral ...

Snap out of it! she admonished herself.

"It's Imogene!" she cried out to Burt, who was trying to strap Mark--Mark's body--across the buoy. It kept slipping off. "The chopper!"

"What's chopper?" asked Burt distractedly.

"Damn it, Burt, snap out of it. I can't handle all this alone."

"What's alone?" asked Burt. Pulling a strap from his waist, he tied Mark's hands together so that he hung over the buoy, his head just barely underwater.

The buoy rose and fell. Mark's eyes were wide open, and for the first time Cynthia saw the hole in his cheek where the bullet had gone in. It was hardly bloody at all. She didn't want to look at the back of his head. She tried to close his eyes but they seemed stuck open.

"Burt, this is bad," she muttered.

"What's bad?"

Behind her, Cynthia could hear the snarl of the outboard approaching. She turned and saw the bow wave of the stubby little dinghy as it sped straight toward her. It, too, was gold.

"Here!" Cynthia called out, waving frantically.

The sound of the outboard dropped to a growl, and the dinghy slowed. There were several figures aboard, not just Imogene. The police, Cynthia hoped. She felt a sudden childish desire to see a uniform.

"What's wrong?" Burt asked.

"Wrong?" Cynthia shook her head. Imogene was kneeling in the bow. She was smiling her usual smile, but instead of her usual pizza she was holding a vitrine glow-lamp. In the circle of light, Cynthia could see the two other people in the boat.

One of them was Mark. He was driving, wearing a wetsuit.

The other, also wearing a wetsuit and a tentative, unfamiliar smile--was herself.

Sent By:Terry Bisson on Sunday, April 27, 1997 at 06:06:53.

How dare Burt clone her? There was no doubt in her mind that it was Burt. Junco with her passion for weather and dinoflagellates? Cynthia did not think so. Mark with his rigid cortical encephalisation? Why he could barely work up a decent sexual fantasy. But Burt, now. Burt had medical training. Burt was a surfer boy with no limits he was willing acknowledge. Burt would see the humor in clones. Two girls for every boy.

Cynthia did not know when she had felt so violated. She had never been more alone than at this very minute, staring across the golden chop at her own face on her own body. Just lately, she'd been filled with such a warm, such an all-embracing -- with a sticky, treacly kind of love for all living creatures. Those above the surface and especially those below. The deadly reef-choking Crown of Thorns starfish. The great whites. Mark, Burt, and Junco. All part of the circle of life. Mother Earth had no favorites among her children, so neither did Cynthia.

But Cynthia did not like this woman with her matching wetsuit and her matching face. She paddled, upright, at the surface of the water, just outside the ring of the light. "I know all about you," she said to herself. "I know exactly how you think. So don't even think about it."

"What is you?" Cynthia² asked. She had a stupid I-love-life look on her face. Really she was a colossal drip. Cynthia couldn't bear it. She dove and stroked along the coral road.

Cynthia always thought better underwater. The first thing she saw was that if she did not like Cynthia² then Cynthia² did not like her. This had the incontrovertibility of a mathematical proof. She thought of Mark's frozen eyes. She had better watch her back.

She swam away from the clones and back toward the shore. Because the second thing she saw was that Junco was not the sort to murder her friends on the beach. Friendly, happy, lovely Junco. Obviously she'd been replaced by a fiendish double. Cynthia could only blame herself for not seeing this immediately; she should have had more faith. So where was the original? Dead like Mark? Or was she somewhere on the island, trusting Cynthia and Burt to come and rescue her? And then she saw the third thing. The third thing was that there was no reason for Burt to clone himself. No reason that Cynthia could think of. The thought of him disassembling, towing Mark with that feigned imbecility was the first thing that really frightened her. Terrified her. Gave her a physical chill. What the hell was Burt up to? And Imogene? Best just to stay away from Imogene until she had more data.

Now the water was becoming very cold . She tried to surface but she had not managed to swim away from the dinghy after all; in fact, the dinghy had followed her in. And then the noise began

again, the grinding growing of the reef, the coral was shimmering, shivering, trying to tell her something with its exuberant doubling, but Cynthia was underwater this time and the message from the deep was loud enough to knock her out. The last thing she saw was the belly of the boat right above her head. The ocean in her mouth tasted like blood.

Sent By:Karen Joy Fowler on Friday, May 2, 1997 at 11:30:35.

The lantern light was painful. Time moved in little jumps when she closed her eyes. Someone moved her head around as if it were an object to be examined, which should have been a great deal more offensive than it was.

"Cynthia," Burt was saying. "Cynthia, girl, look at me."

"Fuck off," she said. She needed to get back in the water.

"Come on, Cynth," he said.

Burt seemed a lot more focused, which was good, because she felt a lot less so. The boat wasn't moving. That was something. Imogene was standing in the stern, looking out. Mark2 was sitting in the boat, watching her and Burt. There was no sign of Cynthia2. Small blessing, that.

"Look at me, sweetheart," he was saying.

She looked at him. He had a little flashlight he was flicking in her eyes. "Quit it," she said.

Her head ached more than it had ever ached in her life.

"Who am I, Cynth?" he asked.

"You're a pain in the ass, Burt," she said.

"She swears a lot more when she's concussed," Mark2 observed. How did he know how she acted? She was quite a different person from Cynthia2. She had different experiences. Sensitive dependence on initial conditions and all that chaotic stuff.

"Where are we?" Burt asked.

"On the beach?" she said, not sure. She sat up and Burt helped her. The world swam and then she leaned over the side of the boat and threw up. She did notice that she was throwing up on the beach.

"I need to get back in the water," she said. Being in the water would help. It would help her head and the motion of the water would be comforting. Although she didn't want to swim. She wanted to just float there. And the water had been getting so cold.

"How are we going to get him out?" Imogene said.

Who? Cynthia wondered.

"You're going to stay here," Burt said to her, ignoring Imogene. "What beach?"

"The research station," she said. "Home."

He asked her who the president of the United States was and what the date was. "I don't remember the date," she said, cross. "It's October. Sometime in October. Which is late spring because we're south of the equator."

"Is she okay?" Imogene asked.

"I dunno," Burt said. "I don't have much of a practical medical background. I'm just doing the stuff they do on television."

Imogene was looking out at the water. "Burt!" she called. "Burt!"

"Burt's here," Cynthia said.

"No girlfriend," Burt said. "I'm the copy. The original is still out there, towing the body around and acting like a complete space cadet."

"But there isn't a copy of Burt," she said.

"Well," Burt said, or that is, Burt2 said, "the world might be a better place if that was true, but unfortunately it's not. Although the way he's acting there may not be an original much longer."

"He's got the altered zooxanthellae in him," Cynthia said. "So do I. So does Junco. Is there a copy of Junco?"

"Ducky," Imogene said, "just ducky. How did you get zooxanthellae in you?"

"Coral cuts," Cynthia said.

"So he's delirious," Burt said. "What, from infection?"

"No," Cynthia said. "He's part of the coral, and you're not."

Burt2 and Imogene peered out into the darkness. Cynthia took hold of the side of the boat for balance and then jumped up, making for the water and for Glory Road. She couldn't seem to make her legs and arms work right and she caught the edge of the boat with her foot and went down on the sand. Imogene and Burt2 were out faster than she was, grabbing her and pinning her there on the sand.

"BURT!" she shrieked, struggling, aching, feeling sick.

Burt stood up in the water, rising like the creature from the black lagoon. Except, she was

supposed to be the creature. Burt was the mad scientist. It was too complicated. She went limp and closed her eyes.

"Hey guys," Burt said mildly from the water, "you really need to let her go. She's a lot safer in the water."

"Just come out of there and help me get her to the chopper" Imogene said through gritted teeth.

"Burt," said someone from farther up the beach. Both Burt and Burt2 looked. It was Cynthia2. "Come on," she said.

Sent By:Maureen F. McHugh on Wednesday, May 7, 1997 at 06:00:25.

The sun rose swiftly over the rim of the world. Cynthia shut her eyes against the bright light of the new day.

Once this had been her favourite time, just before sunrise, when the pink of the sky above reflects in the pink of the water below, and the horizon is such a soft blur that you can't where sky began, where sea ended. Now the light just hurt her eyes.

The extra dimension Burt sought was nearly upon them and she hoped it would make him very happy. Both of him.

Cynthia tried her best to slither in the direction of the water.

"No you don't!" Imogene planted a foot firmly in the middle of Cynthia's back. Cynthia's mouth filled with gritty coral sand. Imogene! Cynthia grunted into the grit. Imogene was more than what she seemed, for all her winning ways with pizza and her fancy helicopter.

Burt called from the water, the new mild-mannered Burt. "Imogene, I think you'll find you're making a big mistake. Watch it! They're coming!"

Imogene shrieked as if she'd just caught sight of the Mother of Jaws.

"Run for it!" Cynthia heard Mark2 yell. She saw nothing. Her face was in the sand. Imogene's foot was on her back. Then with one wild yelp Imogene took off, running fast and furiously up the beach.

"Roll for it," Cynthia told herself. Running is the old way. Running is for humans. She tumbled over and over until she hit the water. Then she sank into the clear blue shallows.

Cynthia lay in the water, face down, eyes closed, and took brief stock of her life. She had always wanted a career in science but what the heck, that particular career path was shot to hell these days, what with cutbacks and ever higher hurdles for tenure. Best go with the flow, seek a new career underwater. Real science, hands-on stuff. If she'll still have hands in her new life. The sea made soft plop-plopping noises. Bubbles of subterranean gas rose to the surface past rose to the surface from underwater vents.

When Cynthia opened her eyes again, she saw a vast army of legs.

Cloning people. Their research. Big problem with science. You go looking for one thing, find something else entirely

Like all these legs. Slowly Cynthia lifted her eyes above the water line to see what showed above. She couldn't believe her sore eyes.

A vast army of humanoid clones were walking out of the water, heading away from Glory Road towards the beach. They walked in rough formation, a row of Marks, a row of Synthias, a row of Juncos, a row of Burts.

Some of the clones were more human than coral, others more coral than human.

On the beach Cynthia2 stood like Napoleon at Waterloo before her raggle-taggle polyp-waving army.

"This is war," muttered Cynthia in the water, though deep in her pacifist heart she meant it in the nicest possible way.

Sent By:Rosaleen Love on Monday, May 19, 1997 at 01:32:40.

"You bet it's war," said Burt, lifting his head out of the water beside Cynthia. "She's going to call in air strikes or something."

Imogene had made it to the 444. Turbine whining, the little chopper lifted off and disappeared in the direction of the sunrise.

"That's not what I meant," said Cynthia. The water was warm and less than knee high; they lay on their bellies side by side, like kids in the shallow end, watching the grown-ups.

"She'll be back," Burt said. He imitated Imogene's Aussie accent: "One with extra napalm?"

"Who cares?" Cynthia shrugged and turned to watch the last of the clones march up out of the water, onto the beach. Most were more human than coral; the ones that were more coral than human were struggling in the loose sand. They lay where they fell, legs windmilling, still smiling.

The Juncos stood at the edge of the helipad, draping themselves in golden seaweed, veils and trailing trains. The Burts, Synthias and Marks circled and petted them, oohing and aahing.

"They look like bridal gowns," Burt said.

"They are," Cynthia said. "When I said war, I didn't mean Imogene. I meant this. This ... convergence."

"I know," said Burt.

She looked at him sharply. "You know?"

The clones were standing in a circle, boy girl boy girl boy, holding hands. There were almost a hundred altogether. Only the Juncos wore the seaweed gowns. The others were naked. They all started to sing.

"We all knew," Burt said. "Mark and Junco have been working on it together since Cal-tech. NASA bought him the growth monitor. Hyper-Glaxxon brought me in late."

"So why did Junco shoot him?"

"He tried to back out. She took it personal."

"Who wants to die," said Cynthia. It was not a question. "Convergence is a form of war. It's like marriage. If war is politics by other means, then you could call marriage 'war conducted in the nicest possible way.'"

"You should have been a preacher," Burt said.

Cynthia laughed. She turned on her back and looked up. The sky was pink, the water gold. She had never felt so peaceful. The rage she had felt at seeing Cynthia2 had dissipated at seeing a Cynthia3 through Cynthia26. There were too many Cynthias to stay pissed at. Too many Burts, too many Marks, too many Juncos.

There was another clump of clones coming out of the water, but these were far more coral than flesh, and had no legs at all. They fell into one another, laughing, while noddy terns landed on them and began to pick out their eyes.

Cynthia wanted to throw them back. But not enough to get out of the water. She doubted her legs would work anyway. The singing from the helipad was getting louder. It sounded like mooing.

Cynthia wiggled her toes and smiled. She spread her legs and arms. She looked down at her elbows, thighs, feet--entirely flesh; it already seemed queer! She imagined them decomposing back into fats and salts; it seemed appropriate, symmetrical, somehow tasteful. That made it okay. A Cynthia on the beach waved and mooed like a cow. Cynthia waved back.

"They're going back into the water," Burt said.

"Good," said Cynthia.

"Shakespeare always ended with a wedding," Burt said. "The comedies, anyway."

Cynthia tried to moo.

"I like weddings," said Burt. "Problem is, I always wanted to be the bride."

"Me, I wanted to be the ring," Cynthia said.

They both pushed off backward into deeper water. Hips and legs weightless. Burt tried to moo.

"It's not a wedding between man and woman anyway," Cynthia said. The water covered her like a veil. "It's a wedding between land and sea. Between echinoderm and vertebrate. Between past and the future. Between zooxanthellae and coral."

"Between us and coral," Burt said. "Zooxanthellae is the best man."

"The bridesmaid!" giggled Cynthia.

"The preacher ..."

"The ring!"

Cynthia looked down the beach, away from the sun. The wedding party was almost gone, the last of them flopping into the welcoming water.

The golden tide rolled in, rolled out. Cynthia wondered why she had always been so reluctant to die. She wrapped her arms around herself and Burt. Something was nibbling at her fingers, pulling the flesh quite off. Oh, quite right off! she sang, sucking a white tip of bone. Look!

But the eye part of things was almost gone.

Moo said the zooxanthellae and Cynthia nodded, golden with the waves, golden as a ring, yes, yes I will, O yes.

The End

Sent By:Tbisson on Friday, May 23, 1997 at 10:18:09.