

CLARKESWORLD

ISSUE 137



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Deep Down in The Cloud

JULIE NOVAKOVA

*“What is there more sublime than the trackless,
desert, all-surrounding, unfathomable sea?
What is there more peacefully sublime than the calm,
gently-heaving, silent sea?
What is there more terribly sublime than the angry,
dashing, foaming sea?”*

Floating freely in the dark cold water, Mariana had lost her sense of direction. Suddenly a flash from somewhere (above? where was above?) illuminated the whole ocean, and in that instant, she could see a school of grunions swimming past: hundreds of silvery gleaming bodies together in a mass so alien and intimidating. So beautiful. Light reflecting off their sleek bodies and silver-lined black eyes.

The darkness returned, but it didn't feel the same. She could feel the hundreds of eyes watching her. Irrational, yes. But this moment was beyond rationality.

Another lightning strike somewhere far away revealed a peculiar sight.

Chubs? she thought with an unnatural calm. *How strange. Must be the storm . . .*

However, still no sign of other people.

When the next lightning bolt lit up the murky waters a moment later, she glimpsed something else. She knew she ought to feel dread, fear, panic.

But she was far beyond that too.

“Ready?”

“Ready.”

“Ready,” echoed a second voice, and the three divers submerged together.

As soon as she entered water, Mariana Aguayro ceased feeling anxious. She was in her element. No matter what happens next, she’s where she belongs; and she had trained for what happens next.

It was difficult to tell whether the same applied to Hector Hodges beside her. Even though the full-face mask offered a better view of his face than usual diving masks, she could only imagine how he was feeling. In her imagination, however, he was still as nervous as on their way here.

Iku was already ahead of them, holding his sea scooter like it was a part of his own body. If she felt in her element here, he seemed born in the ocean.

They continued in silence. No need to speak, even if the transceivers would allow them to. They could view speaking as a security risk even here, still far from their destination. The fish-like scooters carried them forward. They could take a moment’s rest for now. Mariana knew they’d need it.

Even though they were not descending yet and it was early, light faded quickly around them. Mariana thought of the darkening skies above. No sane person would go for recreational diving today. They remained alone but for a few by-the-wind sailors above, and some moon jellyfish. The storm was coming. For them, it was ideal.

Iku turned and signaled “down.” She and Hector copied.

The waters grew murkier as they descended slowly. Usually, the visibility would be good. But today, the currents were disturbed by the approaching storm. The water was considerably colder than usual at this time of the year. Mariana could still see Iku’s silhouette beneath, but visibility was dropping quickly.

Finally, she glimpsed the bottom, or at least she thought so. On the sandy shelf, there was no reef to look for, nothing to use as a beacon. Her dive computer showed the depth of 110 feet, same as the analog depth gauge she had refused to leave home.

Upon reaching the bottom, Iku signaled for them to stop. Mariana’s heart skipped a beat.

It’s here. We’re really doing it. Just as we practiced.

It was time to leave the scooters and anchor them here, where they could find them on their return trip. *If there is one.* Even in the murky shade, Mariana saw the fear in Hector’s eyes. In contrast, Iku’s face was almost serene. She imagined hers full of anticipation.

We’re going to free freedom itself.

“Let’s go,” Iku gestured.

Hug the bottom. Kick ever so slowly. The rhythm we finally got right last week.

A week ago, at the same depth, but in clear water on a sunlit day tens of miles away from here, Mariana was trying to pass as a fish. She could see Hector swimming some ten feet from her. Iku floated somewhere overhead, monitoring them as always.

Hug the bottom. Go slowly. Use the add-ons on the suit to simulate fish movement, she recited in her mind. She should probably feel nervous. But being underwater always had a strangely calming effect on her. Hearing your breath, the pounding of your heart, and the ocean surrounding you, while you moved freely in its soothing cold embrace . . . Sometimes she wished she could stay.

“There wouldn’t be any motion detectors on the bottom,” Iku had said to them earlier. “Too many things would set them off. They would rather rely on autonomous guard bots, a few ROVs and aquamesh around the site.”

Hugging the bottom therefore seemed to be a good approach strategy, and Iku provided the rest.

Now they reached the improvised aquamesh: just a fishing net in this case, no fiber-optics. When Iku gave the signal, Mariana and Hector started cutting through it.

He was faster than she this time, having improved a lot. Mariana got used to the full-face mask and closed cycle rebreather already in their first test dive. Hector had a little trouble adjusting to the mask, but he too was an experienced diver and now he seemed just as accustomed to the equipment.

Going through, she signaled and went first.

She saw the outline of their target in the silty waters. Suddenly, a shock wave hurled her onto the bottom and made her earbuds ache. She was scared and disoriented . . . for a few seconds. Then she kicked fast toward where she thought the target was. She couldn’t see a thing through the upraised mud. *We should have thermal*, occurred to her. She wasn’t sure any thermovision mask even existed, but Iku apparently had access to a lot of gear she hadn’t known about.

Hector was beside her in another second. They reached the target, pulled the waterproof Taus and cords and got to work in perfect sync. The screens shone bright in this dim bottom world.

“Incoming,” Iku’s voice sounded suddenly in their ears. Mariana turned around to intercept the danger and readied her underwater gun. But nothing happened. Then Hector announced: “Got it.”

The timer showed eighteen minutes, ten seconds. Best result so far.
A diver silhouette approached.

Ready, Iku signaled. *Up*.

When they were ashore and stripping from the diving gear, Mariana felt oddly elevated. *We did it. We're well under the limit. It really can be done!*

But the greatest news was yet to come.

"There could be severe storms coming next week," Iku announced as he closed the trunk with all the gear and stood by his car, an inconspicuous older wagon. "The timing is ideal. Augur will be conducting some site reliability tests elsewhere. Their guard will be high, but it always is, and they would be more vulnerable at the same time. Be prepared. The next time, we go live."

It was exhilarating to hear that. Next time, it's real. They're gonna rob and sabotage an Augur datacenter.

In the wake of their successful dive and Iku's announcement, they had made a mistake. Mariana would usually take a bus back to LA; after all, Iku had all the diving gear, she didn't need to carry anything. But Hector had offered to drive her home.

"He's being too paranoid," he waved off Iku's earlier advice. (*Do not ride together. Do not call each other. Do not let your paths cross any more than they would before you had met.*). "And he's not here. Are you going to wait an hour for your bus, or be back in LA at that time?"

It wouldn't hurt to get home earlier . . .

They spent the whole ride talking. It seemed like a mere moment when he stopped before her home.

"Wanna come upstairs for a drink?" she said on an impulse. Hector wasn't her usual type. She wasn't into older guys and typically avoided anyone from IT, if mostly for professional reasons, but the excitement of their dive and the upcoming op must have clouded her judgment. The fact that they had shared a secret from the rest of the world may have played a role.

He stayed for several hours. But when she said "you should go," he just nodded and left. They didn't see each other again up until this morning, after Iku had called them. It was time.

She couldn't quite shake off the disturbing sensation that Iku somehow knew.

Hector was the first to notice the bots. *Above*, he gestured.

The AUVs were circling the perimeter in quasi-random patterns. They patrolled for unusual motion, light, heat signatures, sound, or

transmissions. Though Mariana knew about them, her heart still skipped a beat when she saw that one was nearing her position.

Calm down and swim. This was to be expected.

The AUVs continued on their way.

The style they'd practiced seemed to pay off. They had passed as fish. Then she saw what they were looking for. The mesh.

The real danger would only lie beyond that—if they managed to get through.

Mariana glanced at Iku, or rather tried to, but she couldn't see him. The silt whirled beneath them and decreased visibility even further.

But something changed. She glimpsed movement. Silvery glint. Eyes. So many . . .

Pacific mackerel, she thought.

It didn't stop with them.

So he did it; Iku released a batch of pheromones to lure the fish. The schools would provide more cover for them while they try to get through the mesh.

Iku went first, followed by the fish like some strange pied piper.

A sudden if feeble flash of light illuminated even these murky depths for a fraction. The storm above had started.

It would disturb the fish. It would also disturb the AUVs and sensor nets. Motion, thermals, sonar echo—all would be obscured. A lot of unusual activity just might pass unnoticed in a storm . . .

Iku approached the mesh. Mariana waited while he began attaching long stretches of optical fiber to the mesh. Then she saw the signal. She swam toward him and began cutting through the fiber-optic mesh, while Hector approached from another side. Another lightning struck somewhere above.

The final cut. Nothing visibly changed. No dazzler blinded them; no sound weapon thrust them away; no AUVs approached.

They swam through. Shapes began emerging from the mist-like whirling silt. Their ghostly glow felt otherworldly. There was something surreal about the server boxes and glowing displays down here: a true snippet of another world.

How did I ever end up here? Mariana wondered.

Mariana Aguayro sometimes wondered how their lives would turn out if the Sun didn't misbehave. Just *one* peculiar cycle of increased solar activity. It was enough to first render billions of investments in satellite communications lost, and to make other such ventures too risky for another decade; and they could count themselves lucky that

the storms only caused occasional blackouts.

Cables always held most traffic, but Internet giants promised free worldwide web connection for anyone on the planet. High-speed satellite connection in the furthestmost, poorest village on Earth; it was too good to last. It almost hadn't even started before the unprecedented solar storms fried most satellites, high-altitude balloons, and many land facilities too. Solely dependent on cable connections, with the corporations shaken badly and world politics already in disarray, it was a recipe for a slow plunge into unobtrusive dystopia.

If it didn't happen, I may have gone to college.

If it didn't happen, we wouldn't have access outages for days.

If it didn't happen, we might not have lost our freedoms so easily.

She remembered net neutrality, constant quick access to information, and reliable communication from her childhood. Chatting with friends online without worrying about the price or whether the messages would get through at all. Browsing encyclopedias and magazines without end. No outages lasting over an hour. Sometimes it made her feel old, despite not being even in her thirties.

She also remembered a semblance of privacy. Yes, people willingly, if unwittingly granted access to highly personal information to any stupid app, but there was at least a pretense of legal protection, at least some hope that individuals could persist against governments and corporations . . .

This, too, had been taken away, with the help of Augur.

Maybe that's why Mariana liked diving so much. The fish, corals, and crustaceans didn't care for human skirmishes. She could escape into their world, but even there, she would see the discomfiting signs of human presence above. Little had been done to keep the oceans clean. Even down there, in her dream world, Mariana could not avoid getting angry.

So she'd started rebelling. Tiny steps, at first. Then she'd gotten more daring.

Being a hacker was nothing like in the movies she'd watched—and downloaded, impossible now—as a kid. But it was exhilarating nonetheless when she and the fission-fusion crews sometimes succeeded after weeks or months of dull work. Her life became a series of mood swings, and at times she also wondered whether it would have been so, had she been let to live a normal life.

She didn't know how Iku found her.

He sat next to her one day on the beach, an inconspicuous black man of slender build and indeterminate age, and told her without any

fuss that he wanted to hire her for a special job. One that involved both her computer hacking and diving expertise.

She could have said no. She didn't know the stranger at all, nor did he mention having any contacts in common.

But it sounded like the kind of offer you cannot refuse.

She was just a few kicks away from the first server when the world broke.

First, there was light.

A bright flash blinded her for a moment, and a staccato of bright beams followed. No time to think about that. No time to prepare for the sound.

It threw her away like a punch in the chest. Her limbs flailed around her. She felt as if air was knocked out of her lungs. Her chest and stomach hurt badly. She couldn't breathe. And the lights were still there, burying themselves into her skull . . .

Dazzlers and an ultrasonic pulse, some calculating part of her mind said. Shouldn't cause permanent damage, only stun or injure. Get it together.

She kicked away before another cavitation could hit her. Only then she turned and looked back, grasping the underwater gun on her belt, though wary of using it.

But it was no longer necessary.

"Disabled it," Iku's voice sounded in her ears for the first time during the dive. Stealth didn't matter anymore, and they would need to use the transceivers soon anyway.

She looked around. "Hector?"

She didn't see him. Nor did she hear any reply. She was about to call him again, when Iku spoke: "He's alive."

Something in his tone made her shiver inwardly.

Iku moved smoothly, shark-like, toward a dark silhouette barely visible in the silt. She glimpsed him link his suit's computer to Hector's. As she swam nearer, she could see him activate the adrenaline pump in Hector's suit.

The dark silhouette moved, and Mariana heard a sharp intake of breath in the comms. "W-what happened?"

"Dazzler and cavitation," Iku said. "You'll come to. Let's do it."

Mariana would have liked to see whether Hector was okay, but Iku was right; there was little time. They had to get in, and Hector Hodges, a disgruntled former Augur employee wishing to take revenge accompanied ideally by large sums of money, was necessary to manage it quickly.

The servers were just two dozen feet away. This near, AUVs wouldn't use sonic pulses to knock them out; too much risk for the equipment.

Hector and Mariana got to work on one rack, Iku moved to another.

"You all right?" she asked Hector quietly, mask to mask; no need for Iku to overhear.

"Think so," he spoke. Even in these conditions, she could hear his strained breath.

Broken ribs? Internal bleeding? she thought of the risks of cavitation. It was by no means a non-life-threatening weapon. Down here, every injury counted more.

The firewall held fast, but Mariana tried a few new exploits, while Hector worked his angle.

Still nothing . . . Would they have to use plan B and just DDoS Augur without making use of any of the data stored here?

Mariana glanced at her computer. At this rate, she had an hour of resurfacing to look for. An hour within which anything could go wrong.

"We're there," Hector said.

Mariana's heart skipped a beat.

We're really there. Inside Augur's heart . . . about to seize it and tear it out.

She just sent an invite to a feast on the company's internal files to a dozen informal hacker groups; most of them hopelessly idealistic anarchists, some strategically chosen groups that were in for money or mainstream politics, which translated to money anyway.

Her head almost spun.

For a second, she was tempted to look up Iku, regardless of whether the alias had any ties to his real self. Who, or what . . . But no—there was no time to waste.

Now to erasing the user metadata, and all the surveillance we can . . . To watch the watchmen for once. To free ourselves before they load the backups—but others will be ready for that. Let it run another half an hour, please, and then we can have a DDoS as a cherry atop the cake.

There was still a chance that Augur noticed only now what they were doing and couldn't get in touch with its AUVs here because of the storm.

But the storm would also complicate their ascent. They'd all realized the possibility they'd become martyrs, but none wanted to reconcile with that. Not without a fight.

"Iku?" she spoke.

No answer.

"Can't resurface now," Hector pointed above. Even at this depth, they could see the lightning flashes. Even through the transceiver connection,

Mariana heard the strain in his voice. *Hold on. We'll help you ascend*, she thought. But where was Iku? She decided to find out and kicked slowly. Even moving this carefully, she almost caused a silt out. That's why she didn't see what happened next.

She was already at the further rack, and only heard the gasp and ragged, muffled breaths. She turned back, but another shape shot forward alongside her: Iku. She'd never think a diver could move so fast and smoothly, truly like a fish.

Hector's body was jerking as if electrocuted. Mariana glimpsed some strange, ghostlike shape around him in the light of her LED torch, and realized that he *was* being electrocuted.

But Iku was already there, grasping the thing she could barely see, and pulling it away from Hector.

The battle resembled a surreal ballet: a diver against a barely visible translucent shape, swirling and writhing amidst silt. It was entrancing. The Finnish Kalevala myth came to Mariana's mind, because Iku Turso in this instant truly resembled some kind of ancient sea monster like his namesake in the epic: sometimes depicted as a horned creature, sometimes a sea serpent, sometimes octopus-like, but always, always deadly.

The translucent robot sank to the bottom gently.

Iku turned to Mariana. "What are you waiting for?"

She wasn't checking her Tau; she was checking Hector.

He was alive.

But even without glancing at his computer, Mariana knew he wasn't going to make it. His suit was inflating visibly, and he started ascending. His face was constricted with pain. He was still conscious, and very much aware that this was just a brief period before certain death.

I'm so sorry, she thought.

"He was electroshocked," Iku said on the transceiver. "Invisible robot creeps near you, pierces your skin with electrodes, shocks you, and doesn't threaten nearby devices. Didn't know they were in use already."

Sizzling rage got ahold of Mariana. Hector was dying, and Iku was reciting his knowledge of the damn robot that killed him!

"What do we do?" she somehow made her voice sound measured.

"We continue our work."

"No!"

"Yesss," Hector hissed through the pain. His gaze met with Mariana's. They were almost mask to mask. The eerie glow of the underwater servers made his face appear ghostlike. She was looking at it, and so didn't see him pull a knife from his belt and cut at his own drysuit.

The inflation stopped, and then reversed. Mariana took a split-second to realize what he'd done. *The stupid fool!* He flooded his own suit to stop it from inflating. He'd never be able to ascend, even if he got rid of all the weights at once, and he'd get hypothermic in the matter of minutes.

"I'll take care of it," he managed to say. "You get out. They . . . seem to know."

"Continue data transfer while you can," Iku instructed him, and signaled to Mariana to follow him. She lingered for a second, put her mask to Hector's and turned off her transceiver for a moment. Only then did she realize she had absolutely no idea what to say.

He solved it for her. "Goodbye, sweet girl," he struggled to speak, but somehow he managed for the words to sound soft. "Go."

Iku was circling the center, and Mariana noticed he was planting something in semi-regular intervals. She swam to it.

Charges.

Iku waited for her at the far end of the datacenter and signaled to leave.

"Explain first!" she spoke regardless of knowing that Hector will likely hear it. He had the right to know.

"Destroying the center will set Augur back many months, if not years. Time for us to act."

It made sense, she knew it. Just . . . leaving Hector behind, even if the best he could hope in otherwise would be surviving the hypoxia or a stroke after rapid ascent, if they could somehow get him out of his suit and share their air with him . . . No. Hector Hodges was gone and knew it very well.

"What did you really want to gain from this?!" she said.

Iku's lips moved as if in silent prayer. His face, illuminated by the datacenter's glow, looked inhuman, almost demonic.

"What anyone wants," he whispered. "Freedom."

"Who do you think our Iku really is?" Hector had said back during their ride home.

"What do you mean?"

"The equipment he got us, his knowledge of the facility . . . I think he's a frogman."

"Ours, or someone else's?"

Hector laughed quietly. "That's what I'm wondering too."

"He could just be Augur's. Don't they have their own frogmen? Military-grade stuff?"

"I guess so. I even heard some rumors about . . . enhanced soldiers. But I'd think they watch theirs more carefully."

“Like they watch you?” Mariana raised a brow.

Hector seemed unperturbed. “That’s different. I’m unimportant.”

Mariana didn’t question that; they both were. Was Iku too?

“Someone has to clean the facility,” she spoke finally. “Biofouling can be a problem after less than a year down below. Not speaking of tech maintenance.”

“Iku isn’t an IT crowd guy.”

“I never said he was. He could have posed as one.”

“I dunno.” Hector shrugged. “Something seems . . . off about him to me. Can’t explain it.”

Mariana snorted, but it was just a facade; in fact, she felt the same about Iku.

“There must be a lot of people outside our scope of abilities,” Hector continued. “Not just the H+ nerds who implant magnets into their fingers and bloody Fitbits under the skin. I mean gene-modded people, or laced, or fitted with optogenetic circuits, enhanced senses, strength . . . Don’t you think someone must have tried that already?”

“Perhaps,” she said evasively. She didn’t like to think of how she only saw the surface layer of the world, and how much might be going on underneath, concealed by Augur and others like them. It led to paranoid thinking, and she saw enough of that in her mother to know that she wanted to avoid that at any cost.

She was glad when Hector changed the topic and resumed flirting with her.

“Freedom?” she said once they were nearing the aquamesh. “From what?”

Iku didn’t answer. She could think of a thousand options, but recalled her conversation with Hector back in the car all too vividly. But maybe she just felt guilty about Hector.

They began making another hole in the mesh; the first site was likely compromised.

“From my creators and controllers,” Iku spoke suddenly. “Everyone will know now.”

She wanted to ask more, but then there was light.

Something pushed her aside—no, *someone*, it was Iku—and after that she was pushed into the bottom with considerable force.

“Go—” she heard Iku, but his voice was cut out.

Silt was everywhere.

And then all was darkness.

• • •

“Where are the bones, the relics, of the brave and the timid, the good and the bad, the parent, the child, the wife, the husband, the brother, the sister, the lover, which have been tossed and scattered and buried by the washing, wasting, wandering sea?”

. . .and they dug tunnels in the silt and mud, bore into the bottom like worms. Blind, constrained, deaf but for the sound of their breath.

She soothed herself with this image from the past.

As a child, Mariana had loved stories of her underwater heroes. Cousteau and his diving saucer sub. Franzén and his men, excavating the *Vasa* from her infamous grave in the Stockholm harbor. In the decades after she sank in 1628, pioneer divers submerged into the 32-m depth in bells filled with air to excavate some of the treasures the ship had carried. Then, she lay forgotten and silt buried her, until amateur marine archeologist Franzén found her again. To un-sink the ship, they had to dig tunnels beneath her to secure her, and tow her into the harbor.

Mariana remembered the story now, as she clawed her way desperately through the silty bottom. She didn't know how long she'd been out, since she had no way to look at her dive computer, but hopefully she only lost consciousness for a few seconds. She couldn't have been buried deep, nothing could do that; but was she trying in the right direction? Fear almost got ahold of her.

Finally, she felt little resistance.

She emerged from a silt grave into pitch dark waters.

“Iku?” she tried.

Only silence answered her.

She assessed the damage. Her torch was lost, her rebreather got damaged, her trimix would soon run out, and she was still lucid enough to realize she was hypothermic. Her computer was broken, and she lost track of time.

So she did the only thing she could: started ascending as fast as she dared.

Another bright flash of lightning somewhere above. The lone chub, normally a river fish, was swimming desperately in this unwelcoming strange place. Mariana just floated with current. She started feeling strangely elated. *Hypoxia? Or just cold?* she could still guess.

A flash revealed a school of sardines gazing at her with a thousand little eyes.

Big brother watches you, she mused. Even here. Did we change anything?

Lightning—and the briefest of glimpses of a dreadful shape. The strange mask and suit . . .

Frogman. Augur's. Who else?

They were fast, or perhaps there were more secrets she knew nothing about . . . She realized she ought to feel dread, fear, panic. But she was just cold and tired.

Maybe they didn't win. But they didn't exactly lose, either.

A series of lightning bolts. The ominous figure, strobing toward her like in a stop-motion movie. And behind it—

Iku-Turso, son of Old-age, ocean monster, Mariana recalled dreamily the verses she'd looked up in the library.

In the murky ocean, illuminated only by lightnings further away now, she watched the strange battle unfold like a magic lantern projection. *How beautiful*, her mind marveled. Years ago, she'd seen the black jellyfish. It was huge, unearthly, menacing, infinitely elegant. Mariana had almost forgotten to breathe. Dread had seized her. She had only been wearing a spring suit, and the thought of the giant jellyfish stinging her had almost paralyzed her. But her sense of wonder had eventually won. She'd been captivated by the alien motion of the creature and its colors—a whole palette of purple, green, black, scarlet, and more colors as the light changed. It didn't look like an animal at all.

Neither did those two struggling monsters look human.

Who are you, Iku? Mariana mused.

Suddenly, the dark waters turned even darker, as if ink had spilled in the sea. She realized it was blood.

The remaining figure swam closer to her.

"Thank you," she heard in her transceiver, and that was it. "Now we're even."

Later, hard to say how much, she suddenly felt sand beneath her fins, and the next wave threw her ashore. There was no one else.

Mariana gasped and tore off her mask. She hungrily took in a breath of fresh cold air. Then she looked at the raging skies and around the shore, where she saw no artificial lights. She had no idea where she was.

She'd get rid of the suit. She would start walking. She'd try to make it somewhere dry without collapsing. If anyone asked, she'd make some excuse of getting lost in the storm, and give a fake name. Only then would she go online, if possible, and try to find out what they did.

Perhaps, just perhaps, she just emerged on the shore of a different world.

Author's note: *The quotations come from "Poetry and Mystery of The Sea," as referred to by Edward Howland in "Ocean's Story; or Triumphs of Thirty Centuries" (1873).*

ABOUT THE AUTHOR

Julie Novakova is a Czech author and translator of science fiction, fantasy and detective stories. She has published short fiction in *Clarkesworld*, *Asimov's*, *Analog*, and other magazines and anthologies, and her translations of other authors' work appeared in *Tor.com*, *Strange Horizons*, and *F&SF*. Her work in Czech includes seven novels, one anthology (*Terra Nullius*), and over thirty short stories and novelettes. Some of her works have been also translated into Chinese, Romanian, Estonian, German and Filipino. She received the Encouragement Award of the European science fiction and fantasy society in 2013, the Aeronutilus award for the best Czech short story of 2014 and 2015, and for the best novel of 2015. Julie is an evolutionary biologist by study and also takes a keen interest in planetary science.

Obliteration

ROBERT REED

A lot of people preferred this Mars to all the others.

This was the Mars wearing a cobalt blue sea in the north and towering redwood forests across its wilderness south. Ancient volcanoes had been re-plumbed and reinvigorated, helping maintain a deep warm sweetly-scented atmosphere. This was a tourist destination famous for its open-air cities, for flying naked, and for the billion human-stock citizens leading fascinating lives. And best of all, this Mars was a paradise within an arm's lazy reach, and always free.

Kleave didn't know much about the real Red Planet. Just that it was cold and dead on the outside, but infested with bugs underground. Only the Unified Space Agencies had access, and they sent nothing up there but sterile robots. But as a public service, Agency researchers built a faithful model of what was real, using off-the-shelf AIs and a fraction of their annual budget to build a virtual seed planted inside servers somewhere in the depths of the Atlantic. Ten thousand years of inspired terraforming were crossed in a week, and the results were opened for everyone to enjoy: A public playground and an advertisement for scientific inquiry, as well as one of the densest simulations in existence. Only the Disney-Burroughs Mars was as sophisticated, and that park was far too expensive for a man living on investments and a public stipend. Kleave had visited the D-B just once, and that adventure was still being paid off a little more every month.

The public Mars had a famously lovely coastline. Lying inside his *in nubibus*, Kleave felt as if he was facing the warm surf while lying naked on hot butterscotch-colored sand. Full of peppered shrimp and a vodka Collins, the young man was happy and ignorant. There was absolutely no inkling of disaster. Doobie was in charge of the lunch menu, and his long-term partner had just stepped out of her *in nubibus*, needing to

pee and check on the oatmeal cookies. And that happened to be when a mature jelly-island decided to breach on the horizon. Always interesting, the creature began to spit flares while it inflated and deflated its gigantic body, proving its magnificence while driving waves at the red shoreline below. That was a scene worth watching. But then a pair of native humans approached. Tall, tall people with albatross wings growing from those broad Martians' backs, they were a gorgeous couple singing with opera voices. Something intriguing was sure to happen. Should he call Doobie back from the apartment? No, Kleave just stared with shameless, re-woven eyes. Every pixel was supposed to be committed to memory. In a world of easy tricks, this was about the easiest. Kleave watched the girl catch her boy in midair, her body curling around his and then pulling both of them into the impossibly warm surf. A romantic embrace ended with the Martians emerging, laughing as they shook those white feathers dry, and then the lad began to chase the girl, first with long, graceful strides, and then both in the air again, musical giggles merging with the souging of slow magnificent waves.

The lovers vanished and the jelly-island submerged again, but then the promised cookies arrived, warm and moist, familiar hands slipping them inside Kleave's *in nubibus*.

Doobie appeared beside him, spectacularly naked. "What did I miss?" "Quite a lot," he promised.

Yet the world's simplest trick refused to cooperate. Kleave first tried to summon the strangers coupling in the water, then tried to bring back the giant cnidaria quivering under the silvery-blue air. Yet neither memory file seemed to exist.

"What are you doing wrong?"

That was Doobie's first reaction.

"I'm doing nothing wrong," said Kleave. Then he failed to summon up half a dozen random events. The terror grew until his heart pounded, and that's when Kleave finally tried to bring back the evening when he first took this glorious woman to bed. An event which he remembered very well on his own. But even that eternal file was gone.

"That's crazy," Doobie said.

Kleave wanted to agree with her.

"You've done something wrong," she kept insisting.

Which implied that he could do something right and fix this.

"Fix it," she said.

That's what Kleave intended to do, for sure. But where to begin? Eleven years of a thoroughly recorded life had been lost, and the beautiful, disagreeable woman beside him seemed like a stranger.

• • •

“Three archives,” said the wizard. “That’s the common standard.”

“And that’s what I did.”

“Two technologies, two languages.”

“Yes, and yes.”

“With one archive kept off-site.”

Kleave couldn’t remember where that “on-site” storage was, but he was confident about his “off-site” archive. “I’ve got a second null-drive at my sister’s apartment.”

“And your sister lives underground?”

“Sure. In an abandoned gold mine, sure.”

The wizard stared at him, humorless as stone.

“Okay, I’m kidding,” Kleave said. “But the drive is sitting safe inside a lockbox, and I should be able to access it now. Right?”

Scorn filled that older face. Was this was a real man running diffusion software, talking to multiple clients, or a single AI designed to make unfortunate souls feel even more miserable than they already were?

“I know what you’re thinking,” Kleave said.

“What? That idiots deserve their fates?”

Only humans could be that dickish. “Yeah, well. Just try and help me figure out my fate. Would you please?”

A shiny probe appeared. Kleave’s face was interesting, then his neck. The hunt ended with a spot behind the right ear.

“Now I remember,” Kleave said. “It was implanted in college, when I upgraded from . . . what? Did I have an Intel archive before this?”

“How the hell would I know?”

Yeah. Definitely a human male.

“Okay, I see the problem,” the wizard said. “Judging by the damage, it looks like a fat daughter hit you.”

“Fat daughter?”

“Born from an ultra-high-energy mother particle. That big gal struck the upper atmosphere, triggering a rain of particles. I’m guessing your sister lives nearby.”

“It’s a long walk.”

“Of course those daughters aren’t as energetic as the original. But one of them definitely found you inside your apartment, and in the same thousandth of a second, one of her sisters struck your precious lockbox too.”

“God, that sounds so unlikely.”

“Disasters are always unlikely. That’s why nobody seems ready for them.”

Except “disasters” were other people’s problems. This was a catastrophe. Struggling for hope, Kleave said, “Maybe something else went wrong.”

The wizard didn’t call him, “Idiot.” Except with those narrowed eyes and that smug, silent mouth. “Well, that’s a thought. But null-drives are extraordinarily reliable, and a ‘failure’ signal in one drive triggers its twin into disaster mode. Fifty milliseconds. That’s all you need for the full library to be replicated and partitioned, then rapidly off-loaded.”

“Off-loaded where?”

“I’ll assume that your sister has neighbors. Well, in this case every adjacent null-drive absorbs a little piece of your library. That’s the standard protocol, years old and proven. You would have heard alarms announcing the event, and I’d see the data begging to be noticed now.”

Kleave was listening, and he wasn’t listening. He was mostly focused on his anger and misery as well as the profound embarrassment. And this very unpleasant wizard and his technology were very impressive. Except Kleave didn’t want to feel impressed just now. Pissed seemed like the perfect state of mind. “Okay, the backup drive failed. Two daughters struck my archives at the same time. But what about my second backup? I’m wearing a DNA chip that’s nearly new.”

A different tool appeared, blunt and dark. It quickly dropped to his hip, settling on the left side.

“I see one Amber Forever Repository, last year’s model.”

“That’s when I bought it.” Kleave didn’t remember the cost, but vivid wet-memories reminded him about the monthly payment. “It’s a state-of-the-art masterpiece. That’s what my research said.”

“The Amber Forever is basically good. But there was an enzyme update three months after it reached the market.”

“I did that update.”

“Did you?”

“Sure.” Kleave was aiming for confidence. He wanted to put an end to this professional disgust. But he was also suffering a faint recollection, something about a little chore going unfinished. “Okay, let’s say the update wasn’t done or done properly. What does that mean for me?”

“When the null-drive in your skull fails, the Amber Forever should prepare for a retrieval of its inventory. But the original enzymatic matrix had a flaw. Without that critical update, there’s a one-in-seventeen chance that the DNA self-wipes itself.”

“And why the hell would it?”

“That’s standard protection for encrypted files. Popular with intelligence agencies and media empires.”

“I’m neither of those things.”

“But that is what the Amber Forever was. Before the commercial models were released, it was the archive that could never be beaten.”

“I feel beaten,” Kleave said.

“‘Obliteration.’ That’s the industry’s term for this business.”

There was no way to calculate this awful luck. A single particle coming from outside the galaxy had burned out two innocent null-drives, and after that happened, an array of DNA washed away everything that it had ever learned. Kleave wanted to hit something. Not the wizard, since he might take offense. But attacking one of the walls seemed reasonable. The virtual office offered fake shelves full of photographs that must mean something to its owner. Kleave could throw every portrait to the floor and then stomp them under his feet. That seemed halfway suitable, pretending to destroy another man’s invincible memories.

And thoroughly stupid too. With a defeated sigh, Kleave asked, “So what do you advise?”

The wizard sat up and offered a suddenly eager smile. “Standard procedure would be for you to remove the null-drive from your neck and grab its mate from its box. With available methods, and patience, I should be able to recover . . .” There was a pause. Technical aspects were in play, but the client’s pain as well as his bank accounts needed to be weighed too. “Twelve, maybe fourteen percent of your files would be retrieved. But a random sampling, with acceptable degradation of sensory quality.”

“Acceptable degradation” sounded like an eight percent recovery. That’s how techno-juggling worked. Kleave decided to abuse the virtual floor, stomping hard, delivering a much-welcomed dose of pain to the soles of his feet.

“Of course I can borrow from other people’s archives,” the wizard continued. “Friends and family will be easy enough, and sometimes you come across useful strangers. The goal is to harvest enough data and build a convincing likeness of your life experiences. Which will always be other people’s experiences, except for the realigned perspective.”

“That sounds expensive,” Kleave said.

The man didn’t disagree. Better to shrug with resignation, then tell the client, “I’m old. I was alive when memory was weak and people took snapshots to help us remember. But the pictures were simple and aged badly or got tossed out by mistake. So we threw slightly better photographs up on the cloud. But then came the Hacks of ’29 and the advent of cheap, nearly infinite private storage. That’s the history. That’s why memory is weaker now than ever. Nobody remembers shit. We don’t have to. Everything that happens is clean and pressed, eagerly waiting for us, and we don’t know what to do without it.”

“And you think the cost would be worthwhile?”

“To me, recovery would be priceless.”

“Except you won’t ever have my troubles. Will you? I bet you have more than three archives.”

A big smile, a slow nod. “Six of them, and four languages. And three null-drives are secured inside deep vaults, on separate continents.”

Kleave gave the floor another hard kick.

Which the wizard noticed. But Kleave’s misfortune deserved a warm little smile. What mattered now was to make the sale, and that’s why he leaned forward. “But really, you aren’t a careless fool. You’re not like the usual cases that I see. What happened to you . . . well, it’s remarkably rare, and in so many ways.”

“Others suffer like this?”

“The Obliteration of Everything. It happens all the time. Usually when a single old and badly maintained archive fails.”

And that’s when Kleave detected the faint beginnings of something that wasn’t pleasurable, no. But suddenly this situation wasn’t as lonely or quite as horrible as it once seemed.

Doobie was a woman of appetites and ideas and loud, blunt enthusiasms. She could be lovely and she was always physically impressive, but when his partner was sick, she became radiant. Illness was an event worth experiencing. Something about a good fever made Doobie more vivid, and Kleave secretly looked forward to the days when he had to serve as a tireless nurse to this complaining beast.

But Kleave’s illnesses and mishaps were never as well-received.

“You didn’t take care of your archives,” Doobie told him.

“I did what I could, and I thought it was enough,” he said.

“That enzyme update,” she said. “Did you or didn’t you do the mandatory update?”

With nothing but his soggy brain in play, Kleave couldn’t remember anything with certainty. But “I don’t know” seemed dangerous. Instead, I redirected the conversation by saying, “You should have been with me. To ask questions and punch the walls for me.”

“And that would have helped how?” Doobie always found excuses when her roommate visited a physician, AI or otherwise. And apparently it was the same for tech-wizards. “No, I’m too angry to sit. Too furious to ask questions. We’re together all these years, and now, because of all these little catastrophes, you’ve lost everything that we’ve ever shared.”

Doobie used to be flat-chested and then she was a buxom lady, but now she was back to the original shape. And those were just a few of the

changes with a topography that was never quite happy with itself. Yet every version of Doobie had lived inside archives that Kleave trusted as much as his next deep breath. An infinitely complex apparition had lived inside his null-drives—a wondrous lady that shared the world with him all the way back to college. For years, they remained stubbornly unaware of each other's existence. But re-woven eyes meant that every glance was recorded, and auditory sinks meant that every overheard word was real. Doobie was the big and pretty girl on the track-and-field team who threw the shot farther than any other woman. And Kleave? The handsome if rather shy boy who looked at his future partner exactly 156 times before finally noticing her wonders.

They went to the public Mars on their fifth date. They were already lovers, and that particular day didn't offer any special fun. But worlds were the same as people. Sometimes it took 156 inadequate glances before you noticed what was precious. Or sometimes it took seven visits and staring into the throat of a reborn volcano, and then the two of you emerged ready to stop dating other people, at least for the time being.

That's the promise Kleave made to Doobie and to himself. Though she was never as enthusiastic towards monogamy. They often shared archives, and sometimes he caught glimpses of other sexual adventures. Of course digital records had another spectacular power: The unwelcome and unseemly could be purged. A jealous-minded lover could make those bad minutes go away. Except Kleave never did make that effort. The way he looked at it, his partner was a world of flesh recorded in staggering detail, and he would never throw away anything that was Doobie. Each touch and the smell of her breath was waiting to be remembered, and even the flavor of his sweat mixed with hers. Kleave always wanted those joys close. Just as he never wanted to stop hearing that strong lady who was never ashamed to speak her mind.

"Well," said Doobie. "Regardless of blame, you'll of course get this problem fixed."

Kleave stared at his roommate. This woman. Her hair was short, the clothes casual, bare toes digging into the stones resting beside a Martian river, cool water charging down a new canyon, making for the cobalt sea.

"It's expensive," he began.

"And I know that," she interrupted. Except her knowledge didn't push very far into the finances. She didn't sit in the wizard's office, and she didn't show the slightest interest in liability law or Kleave's financial resources. And she absolutely hadn't put in the hours that he had spent researching this business of Obliteration. Which was perfectly named,

and as he had learned, far more common than he would have guessed yesterday.

“Just pulling what remains from the two null-drives,” he said. “That would cost more than ten days on Disney-Burroughs.”

On that Mars, Doobie played the powerful princess.

But this woman, the one standing before him, wasn't a princess. And this Doobie wasn't the splendid force of nature that he loved. That idea arrived suddenly, entirely by surprise, and then it refused to let him go.

“Well, someone should pay for this,” the stranger said.

“Like who?” Kleave asked.

“The companies that built these awful drives. They should be happy to replace everything that failed.”

“The Amber Drive is under warranty,” he mentioned. “I'm entitled to a new, updated model.”

But then Doobie found a larger target. “A government that cares for its citizens, that educates us and treasures us . . . that sort of government should protect our pasts too. With a shared repository, or something else along those lines.”

Kleave didn't see how any of these words helped.

“You're awfully quiet,” she said.

He agreed with silence.

Then the original, most urgent question returned. “So how did you let this happen?”

Obviously this woman was a stranger. Kleave's Doobie was eleven years of vivid existence, while this was just a thin slice of one mostly unknown existence. Her name didn't matter. Kleave stared at the short hair and brown face and the anger that seemed quite familiar, but without the help of the archives ready to blunt the bad moments, offering up treasured moments and perfect long days.

“Why won't you answer me?”

Kleave didn't particularly like this woman.

“What are you thinking?” the stranger asked.

“That I can't afford to do anything about anything,” he said. “Except outfit myself with new archives. And since your equipment isn't any better than mine, we need to give you more backups too.”

“But I didn't lose anything,” she said.

What did that mean?

“My *in nubibus* and yours are always side-by-side,” she said. “But did any of my archives die?”

“Radioactive daughters are tiny.”

“I know that.”

“This was just stupid bad luck,” he said.

A heavy, doubtful sigh.

“Or did I have a plan? Is that what you’re thinking?”

“No.” That idea sounded spectacularly paranoid, even in her ugly mood. “Where would such an idea even come from?”

“Because this was nothing but an accident,” Kleave said. At least those were the words that came out of him. Except his voice felt wrong, as if he was nothing but the bottle carrying the expected sentence.

She became the silent one now.

“I need to leave,” he said.

This Doobie shifted her weight. “Okay. Sure.” Staring at the pathetic man was painful. Kleave had lost every second that they had ever shared, and it took all of her grace to say a few obvious words. “You’re off to get some new archives. Right?”

That plan was set. He had addresses written on paper, yes. But Kleave said, “No. First I’m going to go to my sister’s and collect the other dead null-drive.”

The old Doobie had always feuded with Kleave’s sister.

This Doobie seemed much the same. “Fine. You do that.”

“Do you want to come with me?”

“No.” Then she thought about it, hard. And again, she said, “No.”

And for the first time in days, Kleave physically left their home. The apartment was no bigger than a space capsule bound for another world. Outdoors, the world turned huge. Pausing on a street corner, Kleave contemplated the idea that he could go anywhere and do almost anything, and no record of his adventures would be baked into some useless slab of Forever Amber.

Full names weren’t offered. That’s what Kleave noticed first. Just a single name and some people shook hands while others didn’t, depending on a lot of factors, including the quality of their *in nubibus*. Kleave couldn’t grasp anyone’s hand. He was inside an old cheap and very public machine, which meant that he could smell the dozens of strangers who had used it already that day. The experience wasn’t as awful as he would have guessed, but this was an experience that he wouldn’t happily do again either.

“Hello there, Kleave,” an older woman said. “And by the way. You have our permission to smile.”

He smiled at the smiling group.

And in a chorus, they shouted, “Hello, Kleave.”

OBLITERATED BY CHOICE. That was the official name for an organization dedicated to living without the modern burdens. At least

that was the stated purpose in the literature that came up high in every search into Obliteration. This meeting was one of eighty currently happening, and he selected it for no reason but the location. This was the well-loved Mars. And in particular, a couple dozen believers had gathered east of Hellas, inside the damp redwood forest where ferns grew taller by the minute and enhanced gibbons rode gigantic tame eagles, hunting for tourists that would throw them baubles, or better, gold coins.

Kleave and Doobie had talked about coming to this district. And now he was here, as without her as he could be.

The gray lady seemed to be the group's leader. "And what brings you to us today, Kleave?"

Being with strangers meant freedom, and even better, Kleave loved being unable to remember even a few of their names. Honesty. That was a quality that he often avoided with people who recorded everything. In that spirit, the new man surrendered a quick description of his day, centering on the major failures of proven technologies.

Some people were impressed, but most preferred superstition. The leader in particular. "Well, obviously, the gods have steered you to us," she said. "You should take this wonderful day as a clear, unimpeachable sign."

All right. That wasn't the expected response. But again, Kleave felt free to tell them, "There aren't any gods. The galaxy turns on its own."

That won giggles from several faces, and from the high branches, laughing gibbons.

"Bad luck is nothing but bad luck," he told everyone.

Then one man said, "Yet you haven't replaced your archives. Have you?"

"Not yet, no."

"Gods or not, you seem ready for a different course."

Testimonies. Suddenly everyone had to share earnest tales about how good life was without re-woven eyes and terabytes of absorption. Several of these passionate, possibly crazed believers came close enough to grab hold of him, then couldn't because his *in nubibus* was that awful. But their faces were pushing too close to his face, and although different people kept talking, all the same words were being said.

"The old, proven memories."

"So much better than null-sinks."

"And so much cheaper too."

Then he posed what seemed like a reasonable, obvious question. "How do others react to your beliefs?"

“Badly.” Everyone said so, in every possible way, and there was no greater pleasure to be found. They boasted about being dismissed as outcasts, deviants, and moderately insane, or much worse than that. But the believers knew better. “We know best,” they sang. Life without archives meant trusting a brain that did spectacular things for millions of years. These ancient neurons were forgetful and lovely because of it. Memory should be just like the brain it inhabited, soft and malleable. Parts of yesterday and most of last year were lost, but that was a very good thing. Ordinary life deserved to be discarded. All that mattered were the impressive and shocking days, and those very pleasurable moments that stood tall and bright inside the dreary gray of normal existence.

Without question, their enthusiasm for ignorance was impressive. They had mastered a logic that arrived with force. Kleave found himself believing everything just long enough to surprise himself. But then the doubter inside him would take charge, and he’d have to squelch a laugh and a hard shake of the head. Ten minutes of passionate noise, and he still didn’t know which side of the line to choose.

Then someone wiggled a fingertip camera, naming the model while bragging about its cheapness and its terribly tiny memory. “So you can’t catch more than a few special scenes,” she said. “Nothing more than that.”

But that was too much. Others became angry enough to curse, while their leader tried to staunch what was plainly an old political fight. “Now we’ve agreed to disagree, and let’s focus back on Kleave.”

But then one fellow stepped forward, and almost everyone else groaned. Which he appreciated. Scorn brought energy, and he couldn’t keep his voice from shouting when he stated his own vision of life without mental aids.

“I don’t accept written words,” he stated.

“What can that mean?” asked Kleave. “You don’t read or write?”

“And I don’t know how to do either.”

How could anyone be illiterate? That seemed too bizarre.

Then the old lady succeeded in touching the new recruit. Just for an instant, Kleave felt the pressure of fingers, and with a threadbare patience, she reported, “Our Lauren had his brain worked with. Supposedly, he can’t do more than recognize letters and some of their sounds.”

“Supposedly” was the most important word in that account.

“We don’t believe him,” a younger woman admitted.

But that only encouraged the true believer. Looking and sounding like everyone else, except for the specific words that he used, Lauren stood tall while he explained, “I live without artificial tricks or aids

from any time in the last ten thousand years. And that's why I'm the only pure one here."

And that's when a great fight broke out.

Nobody noticed when the newcomer, whatever his name, managed to slip off into the emerald ferns. Kleave walked until he couldn't hear any human. A gibbon and her eagle landed on the path before him, both begging for gold, and because nothing was real here, he gave them what they wanted badly—a digital bauble that one swallowed whole, keeping it safe in the belly.

He walked a little farther into the Martian wilderness.

But as happens sometimes when a cheap *in nubibus* pushes against the limits of any data-drawn world, the ferns grew yellowy pale and the ground softened until every step landed on pillows, and the deep sky beyond the redwoods forgot which blue it should be.

Doobie was sitting on the floor of the tiny apartment, tired of crying but not angry enough to stand when Kleave finally came home.

"You didn't go to your sister's," she began.

They owned two chairs, and he took the nearest one. It was the chair that Doobie preferred, and she didn't seem to notice.

"I got worried," she said. "So worried that when you didn't come home, I called that awful woman. Why does your sister hate me so much?"

"You were rude to her," he said.

"When?"

"I don't remember," he said. "But she does. It was the day when you two met, and you said some unkind words about . . . well, it doesn't matter what you said. The point is, she's never let those ten seconds get lost."

Doobie was sick with misery. How wonderful!

"So you called my sister, but she hadn't seen me. Is that right?"

"I thought you might be leaving me," Doobie said.

"I considered it."

"And maybe you've come back for your belongings?"

"Maybe I haven't decided yet."

That broad body stiffened, and then hopelessness won. The old athlete seemed to turn to paste, soft and ready to flow. The weakest voice of her life said, "I won't fight you. If you want to go."

Kleave abandoned the chair for the grimy floor. The two of them sat with legs crossed, facing not so much each other as the third corner in a tidy triangle. Looking at that empty space, he said, "I went to Mars with strangers and learned a lot."

“Good for you.”

“Then I finally walked to my sister’s. Which wasn’t long after you called her, by the way.”

Staring at the same bit of air, Doobie said nothing.

“Like I planned, I was going to retrieve the other broken null-drive.”

“I am sorry,” said Doobie.

And then, “I know what I said. When we met, I told your sister she was too pretty to ever ever ever be unhappy about anything.”

“She didn’t like those words.”

“I guess not.”

“Anyway.” A moment passed into another several moments, nothing memorable in the bunch. And then Kleave dropped a little piece of machinery on the dirty rug between them.

“What’s that?”

“An old Intel archive,” he said. “My archive, once. I found it in the lockbox with my irradiated archive. I’d forgotten I put it there, or that it existed anywhere. And do you know what, Doobie?”

“No. What?”

“Because it was so easy to do, I plugged this old model into my new archive. One connection. That’s all it took. And for the last eleven years, it’s been backing up my null-drive, a terabyte at a time.”

“Eleven years?”

“Yes.”

She stared at him, hope buried under all the fear of being too hopeful. “Was there room in the old drive for that much time?”

“Just barely.”

“So now you can get your memories back?” she asked.

To which Kleave said, “I never lost my memories, darling. Just a big world made up of tiny, tiny days.”

ABOUT THE AUTHOR

Robert Reed has had eleven novels published, starting with *The Leeshore* in 1987 and most recently with *The Well of Stars* in 2004. Since winning the first annual *L. Ron Hubbard Writers of the Future* contest in 1986 (under the pen name Robert Touzalin) and being a finalist for the John W. Campbell Award for best new writer in 1987, he has had over 200 shorter works published in a variety of magazines and anthologies. Eleven of those stories were published in his critically-acclaimed first collection, *The Dragons of Springplace*, in 1999. Twelve more stories appear in his second collection, *The Cuckoo’s Boys* [2005]. In addition to his success in the U.S., Reed has also been published in the U.K., Russia, Japan, Spain and in France, where a second (French-language)

collection of nine of his shorter works, *Chrysalide*, was released in 2002. Bob has had stories appear in at least one of the annual “Year’s Best” anthologies in every year since 1992. Bob has received nominations for both the Nebula Award (nominated and voted upon by genre authors) and the Hugo Award (nominated and voted upon by fans), as well as numerous other literary awards (see Awards). He won his first Hugo Award for the 2006 novella “A Billion Eyes”. His most recent book is the *The Memory of Sky* (Prime Books, 2014).

Umberright

CAROLYN IVES GILMAN

There is a note from my great-grandmother in the book on my worktable, they tell me. I haven't opened it. Up to now I have been too angry at her whole generation, those brave colonists who settled on Dust and left us here to pay the price. But lately, I have begun to feel a little disloyal—not to her, but to my companions on the journey that brought me the book, and gave me the choice whether to read it or not. What, exactly, am I rejecting here—the past or the future?

It was autumn—a long, slow season on Dust. It wasn't my first autumn, but I'd been too young to appreciate it the first time. I was coming back from a long ramble to the north, with the Make Do Mountains on my right and the great horizon of the Endless Plain to my left. I could not live without the horizon. It puts everything in perspective. It is my soul's home.

Sorry, I'm not trying to be offensive.

As I said, it was autumn. All of life was seeding, and the air was scented with lost chances and never agains. In our region of Dust, most of the land vegetation is of the dry, bristly sort, with the largest trees barely taller than I am, huddling in the shade of cliffs. But the plants were putting on their party best before Umberright: big, white blooms on the bad-dog bushes and patches of bitterberries painting the arroyos orange. I knew I was coming home when a black fly bit me. Some of the organisms we brought have managed to survive: insects, weeds, lichen. They spread a little every time I'm gone. It's not a big victory, but it's something.

The dogs started barking when I came into the yard in front of Feynman Habitat with my faithful buggy tagging along behind me. The dogs never remember me at first, and always take fright at sight of

Bucky. A door opened and Namja looked out. "Michiko's back!" she shouted, and pretty soon there was a mob of people pouring out of the fortified cave entrance. It seemed as if half of them were shorter than my knees. They stared at me as if I were an apparition, and no wonder: my skin was burned dark from the UV except around my eyes where I wear goggles, and my hair and eyebrows had turned white. I must have looked like Grandmother Winter.

"Quite a crop of children you raised while I was gone," I said to Namja. I couldn't match the toddlers to the babies I had left.

"Yes," she said. "Times are changing."

I didn't know what she meant by that, but I would find out.

Everyone wanted to help me unpack the buggy, so I supervised. I let them take most of the sample cases to the labs, but I wouldn't let anyone touch the topographical information. That would be my winter project. I was looking forward to a good hibernate, snug in a warm cave, while I worked on my map of Dust.

The cargo doors rumbled open and I ordered Bucky to park inside, next to his smaller siblings, the utility vehicles. The children loved seeing him obey, as they always do; Bucky has an alternate career as playground equipment when he's not with me. I hefted my pack and followed the crowd inside.

There is always a festive atmosphere when I first get back. Everyone crowds around telling me news and asking where I went and what I saw. This time they presented me with the latest project of the food committee: an authentic glass of beer. I think it's an acquired taste, but I acted impressed.

We had a big, celebratory dinner in the refectory. As a treat, they grilled fillets of chickens and fish, now plentiful enough to eat. The youngsters like it, but I've never been able to get used to meat. Afterwards, when the parents had taken the children away, a group of adults gathered around my table to talk. By then, I had noticed a change: my own generation had become the old-timers, and the young adults were taking an interest in what was going on. Members of the governing committee were conspicuously absent.

"Don't get too comfortable," Haakon said to me in a low tone.

"What do you mean?" I said.

Everyone exchanged a look. It was Namja who finally explained. "The third cargo capsule from the homeworld is going to land at Newton's Eye in about 650 hours."

"But . . ." I stopped when I saw they didn't need me to tell them the problem. The timing couldn't have been worse. Umbernight was just

around the corner. Much as we needed that cargo, getting to it would be a gamble with death.

I remember how my mother explained Umbernight to me as a child. “There’s a bad star in the sky, Michiko. We didn’t know it was there at first because there’s a shroud covering it. But sometimes, in winter, the shroud pulls back and we can see its light. Then we have to go inside, or we would die.”

After that, I had nightmares in which I looked up at the sky and there was the face of a corpse hanging there, covered with a shroud. I would watch in terror as the veil would slowly draw aside, revealing rotted flesh and putrid gray jelly eyes, glowing with a deadly unlight that killed everything it touched.

I didn’t know anything then about planetary nebulae or stars that emit in the UV and X-ray spectrum. I didn’t know we lived in a double-star system, circling a perfectly normal G-class star with a very strange, remote companion. I had learned all that by the time I was an adolescent and Umber finally rose in our sky. I never disputed why I had to spend my youth cooped up in the cave habitat trying to make things run. They told me then, “You’ll be all grown up with kids of your own before Umber comes again.” Not true. All grown up, that part was right. No kids.

A dog was nudging my knee under the table, and I kneaded her velvet ears. I was glad the pro-dog faction had won the Great Dog Debate, when the colony had split on whether to reconstitute dogs from frozen embryos. You feel much more human with dogs around. “So what’s the plan?” I asked.

As if in answer, the tall, stooped figure of Anselm Thune came into the refectory and headed toward our table. We all fell silent. “The Committee wants to see you, Mick,” he said.

There are committees for every conceivable thing in Feynman, but when someone says “the Committee,” capital C, it means the governing committee. It’s elected, but the same people have dominated it for years, because no one wants to put up with the drama that would result from voting them out. Just the mention of it put me in a bad mood.

I followed Anselm into the meeting room where the five Committee members were sitting around a table. The only spare seat was opposite Chairman Colby, so I took it. He has the pale skin of a lifelong cave dweller, and thin white hair fringing his bald head.

“Did you find anything useful?” he asked as soon as I sat down. He’s always thought my roving is a waste of time because none of my samples have produced anything useful to the colony. All I ever brought back was more evidence of how unsuited this planet is for human habitation.

I shrugged. “We’ll have to see what the lab says about my biosamples. I found a real pretty geothermal region.”

He grimaced at the word “pretty,” which was why I’d used it. He was an orthodox rationalist, and considered aesthetics to be a gateway drug to superstition. “You’ll fit in well with these gullible young animists we’re raising,” he said. “You and your fairy-tales.”

I was too tired to argue. “You wanted something?” I said.

Anselm said, “Do you know how to get to Newton’s Eye?”

“Of course I do.”

“How long does it take?”

“On foot, about 200 hours. Allow a little more for the buggy, say 220.”

I could see them calculating: there and back, 440 hours, plus some time to unload the cargo capsule and pack, say 450. Was there enough time?

I knew myself how long the nights were getting. Dust is sharply tilted, and at our latitude, its slow days vary from ten hours of dark and ninety hours of light in the summer to the opposite in winter. We were past the equinox; the nights were over sixty hours long, what we call N60. Umber already rose about midnight; you could get a sunburn before dawn. But most of its radiation didn’t reach us yet because of the cloud of dust, gas, and ionized particles surrounding it. At least, that’s our theory about what is concealing the star.

“I don’t suppose the astronomers have any predictions when the shroud will part?” I said.

That set Colby off. “Shroud, my ass. That’s a backsliding anti-rationalist term. Pretty soon you’re going to have people talking about gods and visions, summoning spirits, and rejecting science.”

“It’s just a metaphor, Colby,” I said.

“I’m trying to prevent us from regressing into savagery! Half of these youngsters are already wearing amulets and praying to idols.”

Once again, Anselm intervened. “There is inherent unpredictability about the star’s planetary nebula,” he said. “The first time, the gap appeared at N64.” That is, when night was 64 hours long. “The second time it didn’t come till N70.”

“We’re close to N64 now,” I said.

“Thank you for telling us,” Colby said with bitter sarcasm.

I shrugged and got up to leave. Before I reached the door Anselm said, “You’d better start getting your vehicle in order. If we do this, you’ll be setting out in about 400 hours.”

“Just me?” I said incredulously.

“You and whoever we decide to send.”

“The suicide team?”

“You’ve always been a bad influence on morale,” Colby said.

“I’m just calculating odds like a good rationalist,” I replied. Since I really didn’t want to hear his answer to that, I left. All I wanted then was a hot bath and about twenty hours of sleep.

That was my first mistake. I should have put my foot down right then. They probably wouldn’t have tried it without me.

But the habitat was alive with enthusiasm for fetching the cargo. Already, more people had volunteered than we could send. The main reason was eagerness to find out what our ancestors had sent us. You could barely walk down the hall without someone stopping you to speculate about it. Some wanted seeds and frozen embryos, electronic components, or medical devices. Others wanted rare minerals, smelting equipment, better water filtration. Or something utterly unexpected, some miracle technology to ease our starved existence.

It was the third and last cargo capsule our ancestors had sent by solar sail when they themselves had set out for Dust in a faster ship. Without the first two capsules, the colony would have been wiped out during the first winter, when Umber revealed itself. As it was, only two thirds of them perished. The survivors moved to the cave habitat and set about rebuilding a semblance of civilization. We weathered the second winter better here at Feynman. Now that the third winter was upon us, people were hoping for some actual comfort, some margin between us and annihilation.

But the capsule was preprogrammed to drop at the original landing site, long since abandoned. It might have been possible to reprogram it, but no one wanted to try calculating a different landing trajectory and sending it by our glitch-prone communication system. The other option, the wise and cautious one, was to let the capsule land and just leave it sitting at Newton’s Eye until spring. But we are the descendants of people who set out for a new planet without thoroughly checking it out. Wisdom? Caution? Not in our DNA.

All right, that’s a little harsh. They said they underestimated the danger from Umber because it was hidden behind our sun as well as its shroud when they were making observations from the home planet. And they did pay for their mistake.

I spent the next ten hours unpacking, playing with the dogs, and hanging out in the kitchen. I didn’t see much evidence of pagan drumming in the halls, so I asked Namja what bee had crawled up Colby’s ass. Her eyes rolled eloquently in response. “Come here,” she said.

She led me into the warren of bedrooms where married couples slept and pulled out a bin from under her bed—the only space any of us has for storing private belongings. She dug under a concealing pile of clothes and pulled out a broken tile with a colorful design on the back side—a landscape, I realized as I studied it. A painting of Dust.

“My granddaughter Marigold did it,” Namja said in a whisper.

What the younger generation had discovered was not superstition, but art.

For two generations, all our effort, all our creativity, had gone into improving the odds of survival. Art took materials, energy, and time we didn’t have to spare. But that, I learned, was not why Colby and the governing committee disapproved of it.

“They think it’s a betrayal of our guiding principle,” Namja said.

“Rationalism, you mean?”

She nodded. Rationalism—that universal ethic for which our parents came here, leaving behind a planet that had splintered into a thousand warring sects and belief systems. They were high-minded people, our settler ancestors. When they couldn’t convince the world they were correct, they decided to leave it and found a new one based on science and reason. And it turned out to be Dust.

Now, two generations later, Colby and the governing committee were trying to beat back irrationality.

“They lectured us about wearing jewelry,” Namja said.

“Why?”

“It might inflame sexual instincts,” she said ironically.

“Having a body does that,” I said.

“Not if you’re Colby, I guess. They also passed a resolution against figurines.”

“That was their idea of a problem?”

“They were afraid people would use them as fetishes.”

It got worse. Music and dance were now deemed to have shamanistic origins. Even reciting poetry aloud could start people on the slippery slope to prayer groups and worship.

“No wonder everyone wants to go to Newton’s Eye,” I said.

We held a meeting to decide what to do. We always have meetings, because the essence of rationality is that it needs to be contested. Also because people don’t want responsibility for making a decision.

About 200 people crammed into the refectory—everyone old enough to understand the issue. We no longer had a room big enough for all, a sure sign we were outgrowing our habitat.

From the way the governing committee explained the options, it was clear that they favored the most cautious one—to do nothing at all, and leave the cargo to be fetched by whoever would be around in spring. I could sense disaffection from the left side of the room, where a cohort of young adults stood together. When Colby stopped talking, a lean, intellectual-looking young man named Anatoly spoke up for the youth party.

“What would our ancestors think of us if we let a chance like this slip by?”

Colby gave him a venomous look that told me this was not the first time Anatoly had stood up to authority. “They would think we were behaving rationally,” he said.

“It’s not rational to sit cowering in our cave, afraid of the planet we came to live on,” Anatoly argued. “This cargo could revolutionize our lives. With new resources and technologies, we could expand in the spring, branch out and found satellite communities.”

Watching the Committee, I could tell that this was precisely what they feared. New settlements meant new leaders—perhaps ones like Anatoly, willing to challenge what the old leaders stood for.

“Right now, it’s a waste of our resources,” Anselm said. “We need to focus everything we have on preparing for Umbernight.”

“It’s a waste of resources *not* to go,” Anatoly countered. “You have a precious resource right here.” He gestured at the group behind him. “People ready and willing to go now. By spring, we’ll all be too old.”

“Believe it or not, we don’t want to waste you either,” said Gwen, a third member of the Committee—although Colby looked like he would have gladly wasted Anatoly without a second thought.

“We’re willing to take the chance,” Anatoly said. “We *belong* here, on this planet. We need to embrace it, dangers and all. We are more prepared now than ever before. Our scientists have invented X-ray shielding fabric, and coldsuits for temperature extremes. We’ll never be more ready.”

“Well, thank you for your input,” Anselm said. “Anyone else?”

The debate continued, but all the important arguments had been made. I slipped out the back and went to visit Bucky, as if he would have an opinion. “They may end up sending us after all,” I told him in the quiet of his garage. “If only to be rid of the troublemakers.”

The great announcement came about twenty hours later. The Committee had decided to roll the dice and authorize the expedition. They posted the list of six names on bulletin boards all over the habitat. I learned

of it when I saw a cluster of people around one, reading. As I came up behind them, D'Sharma exclaimed emotionally, "Oh, this is just plain *cruel*." Someone saw me, and D'Sharma turned around. "Mick, you've got to bring them all back, you hear?" Then she burst into tears.

I read the list then, but it didn't explain D'Sharma's reaction. Anatoly was on it, not surprisingly—but in what seemed like a deliberate snub, he was not to be the leader. That distinction went to a young man named Amal. The rest were all younger generation; I'd known them in passing as kids and adolescents, but I had been gone too much to see them much as adults.

"It's a mix of expendables and rising stars," Namja explained to me later in private. "Anatoly, Seabird, and Davern are all people they're willing to sacrifice, for different reasons. Amal and Edie—well, choosing them shows that the Committee actually wants the expedition to succeed. But we'd all hate to lose them."

I didn't need to ask where I fit in. As far as the Committee was concerned, I was in the expendable category.

My first impression of the others came when I was flat on my back underneath Bucky, converting him to run on bottled propane. Brisk footsteps entered the garage and two practical boots came to a halt. "Mick?" a woman's voice said.

"Under here," I answered.

She got down on all fours to look under the vehicle. Sideways, I saw a sunny face with close-cropped, dark brown hair. "Hi," she said, "I'm Edie."

"I know," I said.

"I want to talk," she said.

"We're talking."

"I mean face to face."

We *were* face to face, more or less, but I supposed she meant upright, so I slid out from under, wiping my oily hands on a rag. We looked at each other across Bucky's back.

"We're going to have a meeting to plan out the trip to Newton's Eye," she said.

"Okay." I had already been planning out the trip for a couple work cycles. It's what I do, plan trips, but normally just for myself.

"Mick, we're going to be counting on you a lot," she said seriously. "You're the only one who's ever been to Newton's Eye, and the only one who's ever seen a winter. The rest of us have lots of enthusiasm, but you've got the experience."

I was impressed by her realism, and—I confess it—a little bit flattered. No one ever credits me with useful knowledge. I had been prepared

to cope with a flock of arrogant, ignorant kids. Edie was none of those things.

“Can you bring a map to the meeting? It would help us to know where we’re going.”

My heart warmed. Finally, someone who saw the usefulness of my maps. “Sure,” I said.

“I’ve already been thinking about the food, but camping equipment—we’ll need your help on that.”

“Okay.”

Her face folded pleasantly around her smile. “The rest of us are a talky bunch, so don’t let us drown you out.”

“Okay.”

After she told me the when and where of the meeting, she left, and I realized I hadn’t said more than two syllables at a time. Still, she left me feeling she had understood.

When I arrived at the meeting, the effervescence of enthusiasm triggered my fight or flight reflex. I don’t trust optimism. I stood apart, arms crossed, trying to size up my fellow travelers.

The first thing I realized was that Amal and Edie were an item; they had the kind of companionable, good-natured partnership you see in long-married couples. Amal was a big, relaxed young man who was always ready with a joke to put people at ease, while Edie was a little firecracker of an organizer. I had expected Anatoly to be resentful, challenging Amal for leadership, but he seemed thoroughly committed to the project, and I realized it hadn’t just been a power play—he actually *wanted* to go. The other two were supposed to be “under-contributors,” as we call them. Seabird—yes, her parents named her that on this planet without either birds or seas—was a plump young woman with unkempt hair who remained silent through most of the meeting. I couldn’t tell if she was sulky, shy, or just scared out of her mind. Davern was clearly unnerved, and made up for it by being as friendly and anxious to ingratiate himself with the others as a lost puppy looking for a master. Neither Seabird nor Davern had volunteered. But then, neither had I, strictly speaking.

Amal called on me to show everyone the route. I had drawn it on a map—a physical map that didn’t require electricity—and I spread it on the table for them to see. Newton’s Eye was an ancient crater basin visible from space. To get to it, we would have to follow the Let’s Go River down to the Mazy Lakes. We would then cross the Damn Right Barrens, climb down the Winding Wall to the Oh Well Valley, and cross it to reach the old landing site. Coming back, it would be uphill all the way.

“Who made up these names?” Anatoly said, studying the map with a frown.

“I did,” I said. “Mostly for my mood on the day I discovered things.”

“I thought the settlers wanted to name everything for famous scientists.”

“Well, the settlers aren’t around anymore,” I said.

Anatoly looked as if he had never heard anything so heretical from one of my generation. He flashed me a sudden smile, then glanced over his shoulder to make sure no one from the governing committee was listening.

“What will it be like, traveling?” Edie asked me.

“Cold,” I said. “Dark.”

She was waiting for more, so I said, “We’ll be traveling in the dark for three shifts to every two in the light. Halfway through night, Umber rises, so we’ll have to wear protective gear. That’s the coldest time, too; it can get cold enough for CO₂ to freeze this time of year. There won’t be much temptation to take off your masks.”

“We can do it,” Anatoly said resolutely.

Davern gave a nervous giggle and edged closer to me. “You know how to do this, don’t you, Mick?”

“Well, yes. Unless the shroud parts and Umbernight comes. Then all bets are off. Even I have never traveled through Umbernight.”

“Well, we just won’t let that happen,” Edie said, and for a moment it seemed as if she could actually make the forces of Nature obey.

I stepped back and watched while Edie coaxed them all into making a series of sensible decisions: a normal work schedule of ten hours on, ten hours off; a division of labor; a schedule leading up to departure. Seabird and Davern never volunteered for anything, but Edie cajoled them into accepting assignments without complaint.

When it was over and I was rolling up my map, Edie came over and said to me quietly, “Don’t let Davern latch onto you. He tries to find a protector—someone to adopt him. Don’t fall for it.”

“I don’t have maternal instincts,” I said.

She squeezed my arm. “Good for you.”

If this mission were to succeed, I thought, it would be because of Edie.

Which is not to say that Amal wasn’t a good leader. I got to know him when he came to me for advice on equipment. He didn’t have Edie’s extrovert flair, but his relaxed manner could put a person at ease, and he was methodical about thinking things through. Together, we compiled a daunting list of safety tents, heaters, coldsuits, goggles, face masks, first aid, and other gear; then when we realized that carrying

all of it would leave Bucky with no room for the cargo we wanted to haul back, we set about ruthlessly cutting out everything that wasn't essential for survival.

He challenged me on some things. "Rope?" he said skeptically. "A shovel?"

"Rationality is about exploiting the predictable," I said. "Loose baggage and a mired-down vehicle are predictable."

He helped me load up Bucky for the trip out with a mathematical precision, eliminating every wasted centimeter. On the way back, we would have to carry much of it on our backs.

I did demand one commitment from Amal. "If Umbernight comes, we need to turn around and come back instantly, no matter what," I said.

At first he wouldn't commit himself.

"Have you ever heard what happened to the people caught outside during the first Umbernight?" I asked him. "The bodies were found in spring, carbonized like statues of charcoal. They say some of them shed tears of gasoline, and burst into flame as soon as a spark hit them."

He finally agreed.

You see, I wasn't reckless. I did some things right—as right as anyone could have done in my shoes.

When we set out just before dawn, the whole of Feynman Habitat turned out to see us off. There were hugs and tears, then waves and good wishes as I ordered Bucky to start down the trail. It took only five minutes for Feynman to drop behind us, and for the true immensity of Dust to open up ahead. I led the way down the banks of a frozen rivulet that eventually joined the Let's Go River; as the morning warmed it would begin to gurgle and splash.

"When are we stopping for lunch?" Seabird asked.

"You're not hungry already, are you?" Edie said, laughing.

"No, I just want to know what the plan is."

"The plan is to walk till we're tired and eat when we're hungry."

"I'd rather have a time," Seabird insisted. "I want to know what to expect."

No one answered her, so she glowered as she walked.

It did not take long for us to go farther from the habitat than any of them had ever been. At first they were elated at the views of the river valley ahead; but as their packs began to weigh heavier and their feet to hurt, the high spirits faded into dogged determination. After a couple of hours, Amal caught up with me at the front of the line.

"How far do we need to go this tenhour?"

“We need to get to the river valley. There’s no good place to pitch the tent before that.”

“Can we take a break and stay on schedule?”

I had already planned on frequent delays for the first few days, so I said, “There’s a nice spot ahead.”

As soon as we reached it, Amal called a halt, and everyone dropped their packs and kicked off their boots. I warned them not to take off their UV-filtering goggles. “You can’t see it, but Umber hasn’t set yet. You don’t want to come back with crispy corneas.”

I went apart to sit on a rock overlooking the valley, enjoying the isolation. Below me, a grove of lookthrough trees gestured gently in the wind, their leaves like transparent streamers. Like most plants on Dust, they are gray-blue, not green, because life here never evolved chloroplasts for photosynthesis. It is all widdershins life—its DNA twirls the opposite direction from ours. That makes it mostly incompatible with us.

Before long, Anatoly came to join me.

“That valley ahead looks like a good place for a satellite community in the spring,” he said. “What do you think, could we grow maize there?”

The question was about more than agronomy. He wanted to recruit me into his expansion scheme. “You’d need a lot of shit,” I said.

I wasn’t being flippant. Dumping sewage was how we had created the soil for the outdoor gardens and fields around Feynman. Here on Dust, sewage is a precious, limited resource.

He took my remark at face value. “It’s a long-range plan. We can live off hydroponics at first.”

“There’s a long winter ahead,” I said.

“Too long,” he said. “We’re bursting at the seams now, and our leaders can only look backward. That’s why the Committee has never supported your explorations. They think you’re wasting time because you’ve never brought back anything but knowledge. That’s how irrational they are.”

He was a good persuader. “You know why I like being out here?” I said. “You have to forget all about the habitat, and just be part of Dust.”

“That means you’re one of us,” Anatoly said seriously. “The governing committee, they are still fighting the battles of the homeworld. We’re the first truly indigenous generation. We’re part of *this* planet.”

“Wait until you’ve seen more of it before you decide for sure.”

I thought about Anatoly’s farming scheme as we continued on past his chosen site. It would be hard to pull off, but not impossible. I would probably never live to see it thrive.

The sun was blazing from the southern sky by the time we made camp on the banks of the Let's Go. Edie recruited Davern to help her cook supper, though he seemed to be intentionally making a mess of things so that he could effusively praise her competence. She was having none of it. Amal and Anatoly worked on setting up the sleeping tent. It was made from a heavy, radiation-blocking material that was one of our lab's best inventions. I pattered around aiming Bucky's solar panels while there was light to collect, and Seabird lay on the ground, evidently too exhausted to move.

She sat up suddenly, staring at some nearby bushes. "There's something moving around over there."

"I don't think so," I said, since we are the only animal life on Dust.

"There is!" she said tensely.

"Well, check it out, then."

She gave me a resentful look, but heaved to her feet and went to look in the bushes. I heard her voice change to that cooing singsong we use with children and animals. "Come here, girl! What are you doing here? Did you follow us?"

With horror, I saw Sally, one of the dogs from Feynman, emerge from the bushes, wiggling in delight at Seabird's welcome.

"Oh my God!" I exclaimed. The dire profanity made everyone turn and stare. No one seemed to understand. In fact, Edie called out the dog's name and it trotted over to her and stuck its nose eagerly in the cooking pot. She laughed and pushed it away.

Amal had figured out the problem. "We can't take a dog; we don't have enough food. We'll have to send her back."

"How, exactly?" I asked bitterly.

"I can take her," Seabird volunteered.

If we allowed that, we would not see Seabird again till we got back.

"Don't feed her," Anatoly said.

Both Edie and Seabird objected to that. "We can't starve her!" Edie said.

I was fuming inside. I half suspected Seabird of letting the dog loose to give herself an excuse to go back. It would have been a cunning move. As soon as I caught myself thinking that way, I said loudly, "Stop!"

They all looked at me, since I was not in the habit of giving orders. "Eat first," I said. "No major decisions on an empty stomach."

While we ate our lentil stew, Sally demonstrated piteously how hungry she was. In the end, Edie and Seabird put down their bowls for Sally to finish off.

"Is there anything edible out here?" Edie asked me.

“There are things we can eat, but not for the long run,” I said. “We can’t absorb their proteins. And the dog won’t eat them if she knows there is better food.”

Anatoly had rethought the situation. “She might be useful. We may need a threat detector.”

“Or camp cleanup services,” Edie said, stroking Sally’s back.

“And if we get hungry enough, she’s food that won’t spoil,” Anatoly added.

Edie and Seabird objected strenuously.

I felt like I was reliving the Great Dog Debate. They weren’t old enough to remember it. The arguments had been absurdly pseudo-rational, but in the end it had boiled down to sentiment. Pretty soon someone would say, “If the ancestors hadn’t thought dogs would be useful they wouldn’t have given us the embryos.”

Then Seabird said it. I wanted to groan.

Amal was trying to be leaderly, and not take sides. He looked at Davern. “Don’t ask me,” Davern said. “It’s not my responsibility.”

He looked at me then. Of course, I didn’t want to harm the dog; but keeping her alive would take a lot of resources. “You don’t know yet what it will be like,” I said.

Amal seized on my words. “That’s right,” he said, “we don’t have enough information. Let’s take another vote in thirty hours.” It was the perfect compromise: the decision to make no decision.

Of course, the dog ended up in the tent with the rest of us as we slept.

Stupid! Stupid! Yes, I know. But also kind-hearted and humane in a way my hardened pioneer generation could not afford to be. It was as if my companions were recovering a buried memory of what it had once been like to be human.

The next tenhours’ journey was a pleasant stroll down the river valley speckled with groves of lookthrough trees. Umber had set and the sun was still high, so we could safely go without goggles, the breeze blowing like freedom on our faces. Twenty hours of sunlight had warmed the air, and the river ran ice-free at our side. We threw sticks into it for Sally to dive in and fetch.

We slept away another tenhour, and rose as the sun was setting. From atop the hill on which we had camped, we could see far ahead where the Let’s Go flowed into the Mazy Lakes, a labyrinth of convoluted inlets, peninsulas, and islands. In the fading light I carefully reviewed my maps, comparing them to what I could see. There was a way through it, but we would have to be careful not to get trapped.

As night deepened, we began to pick our way by lantern-light across spits of land between lakes. Anatoly kept thinking he saw faster routes, but Amal said, “No, we’re following Mick.” I wasn’t sure I deserved his trust. A couple of times I took a wrong turn and had to lead the way back.

“This water looks strange,” Amal said, shining his lantern on the inky surface. There was a wind blowing, but no waves. It looked like black gelatin.

The dog, thinking she saw something in his light, took a flying leap into the lake. When she broke the surface, it gave a pungent fart that made us groan and gag. Sally floundered around, trying to find her footing in a foul substance that was not quite water, not quite land. I was laughing and trying to hold my breath at the same time. We fled to escape the overpowering stench. Behind us, the dog found her way onto shore again, and got her revenge by shaking putrid water all over us.

“What the hell?” Amal said, covering his nose with his arm.

“Stromatolites,” I explained. They looked at me as if I were speaking ancient Greek—which I was, in a way. “The lakes are full of bacterial colonies that form thick mats, decomposing as they grow.” I looked at Edie. “They’re one of the things on Dust we can actually eat. If you want to try a stromatolite steak, I can cut you one.” She gave me the reaction I deserved.

After ten hours, we camped on a small rise surrounded by water on north and south, and by stars above. The mood was subdued. In the perpetual light, it had been easy to feel we were in command of our surroundings. Now, the opaque ceiling of the sky had dissolved, revealing the true immensity of space. I could tell they were feeling how distant was our refuge. They were dwarfed, small, and very far from home.

To my surprise, Amal reached into his backpack and produced, of all things, a folding aluminum mandolin. After all our efforts to reduce baggage, I could not believe he had wasted the space. But he assembled and tuned it, then proceeded to strum some tunes I had never heard. All the others seemed to know them, since they joined on the choruses. The music defied the darkness as our lantern could not.

“Are there any songs about Umbernight?” I asked when they paused. Strumming softly, Amal shook his head. “We ought to make one.”

“It would be about the struggle between light and unlight,” Edie said.

“Or apocalypse,” Anatoly said. “When Umber opens its eye and sees us, only the just survive.”

Their minds moved differently than mine, or any of my generation’s. They saw not just mechanisms of cause and effect, but symbolism and

meaning. They were generating a literature, an indigenous mythology, before my eyes. It was dark, like Dust, but with threads of startling beauty.

We woke to darkness. The temperature had plummeted, so we pulled on our heavy coldsuits. They were made from the same radiation-blocking material as our tent, but with thermal lining and piezoelectric heating elements so that if we kept moving, we could keep warm. The visored hoods had vents with micro-louvers to let us breathe, hear, and speak without losing too much body heat.

“What about the dog?” Amal asked. “We don’t have a coldsuit for her.”

Eddie immediately set to work cutting up some of the extra fabric we had brought for patching things. Amal tried to help her wrap it around Sally and secure it with tape, but the dog thought it was a game, and as their dog-wrestling grew desperate, they ended up collapsing in laughter. I left the tent to look after Bucky, and when I next saw Sally she looked like a dog mummy with only her eyes and nose poking through. “I’ll do something better when we stop next,” Eddie pledged.

The next tenhour was a slow, dark trudge through icy stromatolite bogs. When the water froze solid enough to support the buggy, we cut across it to reach the edge of the Mazy Lakes, pushing on past our normal camping time. Once on solid land, we were quick to set up the tent and the propane stove to heat it. Everyone crowded inside, eager to shed their coldsuits. Taking off a coldsuit at the end of the day is like emerging from a stifling womb, ready to breathe free.

After lights out, I was already asleep when Seabird nudged me. “There’s something moving outside,” she whispered.

“No, there’s not,” I muttered. She was always worried that we were deviating from plan, or losing our way, or not keeping to schedule. I turned over to go back to sleep when Sally growled. Something hit the roof of the tent. It sounded like a small branch falling from a tree, but there were no trees where we had camped.

“Did you hear that?” Seabird hissed.

“Okay, I’ll check it out.” It was hard to leave my snug sleep cocoon and pull on the coldsuit again—but better me than her, since she would probably imagine things and wake everyone.

It was the coldest part of night, and there was a slight frost of dry ice on the rocks around us. Everything in the landscape was motionless. Above, the galaxy arched, a frozen cloud of light. I shone my lamp on the tent to see what had hit it, but there was nothing. All was still.

In the eastern sky, a dim, gray smudge of light was rising over the lakes. Umber. I didn’t stare long, not quite trusting the UV shielding

on my faceplate, but I didn't like the look of it. I had never read that the shroud began to glow before it parted, but the observations from the last Umberright were not detailed, and there were none from the time before that. Still, I crawled back into the safety of the tent feeling troubled.

"What was it?" Seabird whispered.

"Nothing." She would think that was an evasion, so I added, "If anything was out there, I scared it off."

When we rose, I left the tent first with the UV detector. The night was still just as dark, but there was no longer a glow in the east, and the increase of radiation was not beyond the usual fluctuations. Nevertheless, I quietly mentioned what I had seen to Amal.

"Are you sure it's significant?" he said.

I wasn't sure of anything, so I shook my head.

"I'm not going to call off the mission unless we're sure."

I probably would have made the same decision. At the time, there was no telling whether it was wise or foolish.

Bucky was cold after sitting for ten hours, and we had barely started when a spring in his suspension broke. It took me an hour to fix it, working awkwardly in my bulky coldsuit, but we finally set off. We had come to the Damn Right Barrens, a rocky plateau full of the ejecta from the ancient meteor strike that had created Newton's Eye. The farther we walked, the more rugged it became, and in the dark it was impossible to see ahead and pick out the best course.

Davern gave a piteous howl of pain, and we all came to a stop. He had turned his ankle. There was no way to examine it without setting up the tent, so Amal took some of the load from the buggy and carried it so Davern could ride. After another six hours of struggling through the boulders, I suggested we camp and wait for daybreak. "We're ahead of schedule," I said. "It's wiser to wait than to risk breaking something important."

"My ankle's not important?" Davern protested.

"Your ankle will heal. Bucky's axle won't."

Sulkily, he said, "You ought to marry that machine. You care more for it than any person."

I would have answered, but I saw Edie looking at me in warning, and I knew she would give him a talking-to later on.

When we finally got a look at Davern's ankle inside the tent, it was barely swollen, and I suspected him of malingering for sympathy. But rather than have him slow us down, we all agreed to let him ride till it got better.

Day came soon after we had slept. We tackled the Damn Right again, moving much faster now that we could see the path. I made them push on till we came to the edge of the Winding Wall.

Coming on the Winding Wall is exhilarating or terrifying, depending on your personality. At the end of an upward slope the world drops suddenly away, leaving you on the edge of sky. Standing on the windy precipice, you have to lean forward to see the cliffs plunging nearly perpendicular to the basin of the crater three hundred meters below. To right and left, the cliff edge undulates in a snaky line that forms a huge arc vanishing into the distance—for the crater circle is far too wide to see across.

“I always wish for wings here,” I said as we lined the edge, awestruck.

“How are we going to get down?” Edie asked.

“There’s a way, but it’s treacherous. Best to do it fresh.”

“We’ve got thirty hours of light left,” Amal said.

“Then let’s rest up.”

It was noon when we rose, and Umber had set. I led the way to the spot where a ravine pierced the wall. Unencumbered by coldsuits, we were far more agile, but Bucky still had only four wheels and no legs. We unloaded him in order to use the cart bed as a ramp, laying it over the rugged path so he could pass, and ferrying the baggage by hand, load after load. Davern was forced to go by foot when it got too precarious, using a tent pole for a cane.

It was hard, sweaty work, but twelve hours later we were at the bottom, feeling triumphant. We piled into the tent and slept until dark.

The next leg of the journey was an easy one over the sandy plain of the crater floor. Through the dark we walked then slept, walked then slept, until we started seeing steam venting from the ground as we reached the geothermically active region at the center of the crater. Here we came on the remains of an old road built by the original settlers when they expected to be staying at Newton’s Eye. It led through the hills of the inner crater ring. When we paused at the top of the rise, I noticed the same smudge of light in the sky I had seen before. This time, I immediately took a UV reading, and the levels had spiked. I showed it to Amal.

“The shroud’s thinning,” I said.

I couldn’t read his expression through the faceplate of his coldsuit, but his body language was all indecision. “Let’s take another reading in a couple hours,” he said.

We did, but there was no change.

We were moving fast by now, through a landscape formed by old eruptions. Misshapen claws of lava reached out of the darkness on

either side, frozen in the act of menacing the road. At last, as we were thinking of stopping, we spied ahead the shape of towering ribs against the stars—the remains of the settlers’ original landing craft, or the parts of it too big to cannibalize. With our goal so close, we pushed on till we came to the cleared plain where it lay, the fossil skeleton of a monster that once swam the stars.

We all stood gazing at it, reluctant to approach and shatter its isolation. “Why don’t we camp here?” Edie said.

We had made better time than I had expected. The plan had been to arrive just as the cargo capsule did, pick up the payload, and head back immediately; but we were a full twenty hours early. We could afford to rest.

I woke before the others, pulled on my protective gear, and went outside to see the dawn. The eastern sky glowed a cold pink and azure. The landing site was a basin of black volcanic rock. Steaming pools of water made milky with dissolved silicates dappled the plain, smelling of sodium bicarbonate. As I watched the day come, the pools turned the same startling blue as the sky, set like turquoise in jet.

The towering ribs of the lander now stood out in the strange, desolate landscape. I thought of all the sunrises they had seen—each one a passing fragment of time, a shard of a millennium in which this one was just a nanosecond of nothing.

Behind me, boots crunched on cinders. I turned to see that Amal had joined me. He didn’t greet me, just stood taking in the scene.

At last he said, “It’s uplifting, isn’t it?”

Startled, I said, “What is?”

“That they came all this way for the sake of reason.”

Came all this way to a desolation of rock and erosion stretching to the vanishing point—no, uplifting was not a word I would use. But I didn’t say so.

He went back to the tent to fetch the others, and soon I was surrounded by youthful energy that made me despise my own sclerotic disaffection. They all wanted to go explore the ruins, so I waved them on and returned to the tent to fix my breakfast.

After eating, I went to join them. I found Seabird and Davern bathing in one of the hot pools, shaded by an awning constructed from their coldsuits. “You’re sure of the chemicals in that water, are you?” I asked.

“Oh stop worrying,” Davern said. “You’re just a walking death’s-head, Mick. You see danger everywhere.”

Ahead, the other three were clustered under the shadow of the soaring ship ribs. When I came up, I saw they had found a stone monument,

and were standing silently before it, the hoods of their coldsuits thrown back. Sally sat at Edie's feet.

"It's a memorial to everyone who died in the first year," Edie told me in a hushed voice.

"But that's not the important part," Anatoly said intently. He pointed to a line of the inscription, a quotation from Theodore Cam, the legendary leader of the exiles. It said:

Gaze into the unknowable from a bridge of evidence.

"You see?" Anatoly said. "He knew there was something unknowable. Reason doesn't reach all the way. There are other truths. We were right, there is more to the universe than just the established facts."

I thought back to Feynman Habitat, and how the pursuit of knowledge had contracted into something rigid and dogmatic. No wonder my generation had failed to inspire. I looked up at the skeleton of the spacecraft making its grand, useless gesture to the sky. How could mere reason compete with that?

After satisfying my curiosity, I trudged back to the tent. From a distance I heard a whining sound, and when I drew close I realized it was coming from Bucky. Puzzled, I rummaged through his load to search for the source. When I realized what it was, my heart pulsed in panic. Instantly, I put up the hood on my coldsuit and ran to warn the others.

"Put on your coldsuits and get back to the tent!" I shouted at Seabird and Davern. "Our X-ray detector went off. The shroud has parted."

Umber was invisible in the bright daylight of the western sky, but a pulse of X-rays could only mean one thing.

When I had rounded them all up and gotten them back to the shielded safety of the tent, we held a council.

"We've got to turn around and go back, this instant," I said.

There was a long silence. I turned to Amal. "You promised."

"I promised we'd turn back if Umbernight came on our way out," he said. "We're not on the way out any longer. We're here, and it's only ten hours before the capsule arrives. We'd be giving up in sight of success."

"Ten hours for the capsule to come, another ten to get it unpacked and reloaded on Bucky," I pointed out. "If we're lucky."

"But Umber sets soon," Edie pointed out. "We'll be safe till it rises again."

I had worked it all out. "By that time, we'll barely be back to the Winding Wall. We have to go *up* that path this time, bathed in X-rays."

"Our coldsuits will shield us," Anatoly said. "It will be hard, but we can do it."

The trip up to now had been too easy; it had given them inflated confidence.

Anatoly looked around at the others, his face fierce and romantic with a shadow of black beard accentuating his jawline. “I’ve realized now, what we’re doing really matters. We’re not just fetching baggage. We’re a link to the settlers. We have to live up to their standards, to their . . . heroism.” He said the last word as if it were unfamiliar—as indeed it was, in the crabbed pragmatism of Feynman Habitat.

I could see a contagion of inspiration spreading through them. Only I was immune.

“They *died*,” I said. “Two thirds of them. Didn’t you read that monument?”

“They didn’t know what we do,” Amal argued. “They weren’t expecting Umbernight.”

Anatoly saw I was going to object, and spoke first. “Maybe some of us will die, too. Maybe that is the risk we need to take. They were willing, and so am I.”

He was noble, committed, and utterly serious.

“No one wants you to die!” I couldn’t keep the frustration from my voice. “Your dying would be totally useless. It would only harm the rest of us. You need to live. Sorry to break it to you.”

They were all caught up in the kind of crazy courage that brought the settlers here. They all felt the same devotion to a cause, and they hadn’t yet learned that the universe doesn’t give a rip.

“Listen,” I said, “you’ve got to ask yourself, what’s a win here? Dying is not a win. Living is a win, even if it means living with failure.”

As soon as I said the last word, I could see it was the wrong one.

“Let’s vote,” said Amal. “Davern, what about you? You haven’t said anything.”

Davern looked around at the others, and I could see he was sizing up who to side with. “I’m with Anatoly,” he said. “He understands us.”

Amal nodded as if this made sense. “How about you, Seabird?”

She looked up at Anatoly with what I first thought was admiration—then I realized it was infatuation. “I’ll follow Anatoly,” she said with feeling.

The followers in our group had chosen Anatoly as their leader.

“I vote with Anatoly, too,” said Amal. “I think we’ve come this far, it would be crazy to give up now. Edie?”

“I respect Mick’s advice,” she said thoughtfully. “But our friends back home are counting on us, and in a way the settlers are counting on us, too. All those people died so we could be here, and to give up would be like letting them down.”

I pulled up the hood of my coldsuit and headed out of the tent. Outside, the day was bright and poisonous. The coldsuit shielded me

from the X-rays, but not from the feeling of impending disaster. I looked across to the skeletal shipwreck and wondered: what are we doing here on Dust? The settlers chose this, but none of us asked to be born here, exiled from the rest of humanity, like the scum on the sand left by the highest wave. We aren't noble pioneers. We're only different from the bacteria because we are able to ask what the hell this is all about. Not answer, just ask.

Someone came out of the tent behind me, and I looked to see who it was this time. Edie. She came to my side. "Mick, we are so thankful that you're with us," she said. "We do listen to you. We just agreed to go to a twelve-hour work shift on the way back, to speed things up. We'll get back."

I truly wished she weren't here. She was the kind of person who ought to be protected, so she could continue to bring cheer to the world. She was too valuable to be thrown away.

"It's not about me," I said. "I've got less life to lose than the rest of you."

"No one's going to lose their lives," she said. "I promise."

Why can't I quit asking what more I could have done? I'm tired of that question. I still don't know what else there was to do.

Ten hours later, there was no sign of the supply ship. Everyone was restless. We had slept and risen again, and now we scanned the skies every few minutes, hoping to see something.

Edie looked up from fashioning little dog goggles and said, "Do you suppose it's landed somewhere else?" Once she had voiced the idea, it became our greatest worry. What if our assumption about the landing spot was wrong? We told ourselves it was just that the calculations had been off, or the ship was making an extra orbit. Now that we had made the commitment to stay, no one wanted to give up; but how long were we prepared to wait?

In the end, we could not have missed the lander's descent. It showed up first as a bright spot in the western sky. Then it became a fiery streak, and we saw the parachutes bloom. Seconds later, landing rockets fired. We cheered as, with a roar that shook the ground, the craft set down in a cloud of dust barely a kilometer from us. As the warm wind buffeted us, even I felt that the sight had been worth the journey.

By the time we had taken down the tent, loaded everything on Bucky, and raced over to the landing site, the dust had settled and the metal cooled. It was almost sunset, so we worked fast in the remaining light. One team unloaded everything from Bucky while another team puzzled out how to open the cargo doors. The inside of the spacecraft

was tightly packed with molded plastic cases we couldn't work out how to open, so we just piled them onto the buggy as they came out. We would leave the thrill of discovery to our friends back home.

Bucky was dangerously overloaded before we had emptied the pod, so we reluctantly secured the doors with some of the crates still inside to stay the winter at Newton's Eye. We could only hope that we had gotten the most important ones.

There was still a lot of work to do, sorting out our baggage and redistributing it, and we worked by lamplight into the night. By the time all was ready, we were exhausted. Umber had not yet risen, so there was no need to set up the tent, and we slept on the ground in the shadow of the lander. I was so close that I could reach out and touch something that had come all the way from the homeworld.

We set out into the night as soon as we woke. Bucky creaked and groaned, but I said encouraging words to him, and he seemed to get used to his new load. All of us were more heavily laden now, and the going would have been slower even if Bucky could have kept up his usual pace. When we reached the top of the inner crater ring we paused to look back at the plain where two spacecraft now stood. In the silence of our tribute, the X-ray alarm went off. Invisible through our UV-screening faceplates, Umber was rising in the east. Umbernight was ahead.

We walked in silence. Sally hung close to us in her improvised coldsuit, no longer roving and exploring. From time to time she froze in her tracks and gave a low growl. But nothing was there.

"What's she growling at, X-rays?" Anatoly said.

"She's just picking up tension from us," Edie said, reaching down to pat the dog's back.

Half a mile later, Sally lunged forward, snapping at the air as if to bite it. Through the cloth of her coldsuit, she could not have connected with anything, even if anything had been there.

"Now *I'm* picking up on *her* tension," Davern said.

"Ouch! Who did that?" Seabird cried out, clutching her arm. "Somebody hit me."

"Everyone calm down," Edie said. "Look around you. There's nothing wrong."

She shone her lamp all around, and she was right; the scene looked exactly as it had when we had traversed it before—a barren, volcanic plain pocked with steaming vents and the occasional grove of everlive trees. The deadly radiation was invisible.

Another mile farther on, Amal swore loudly and slapped his thigh as if bitten by a fly. He bent over to inspect his coldsuit and swore again. "Something pierced my suit," he said. "There's three pinholes in it."

Sally started barking. We shone our lights everywhere, but could see nothing.

It was like being surrounded by malicious poltergeists that had gathered to impede our journey. I quieted the dog and said, "Everyone stop and listen."

At first I heard nothing but my own heart. Then, as we kept still, it came: a rustling of unseen movement in the dark all around us.

"We've got company," Anatoly said grimly.

I wanted to deny my senses. For years I had been searching for animal life on Dust, and found none—not even an insect, other than the ones we brought. And how could anything be alive in this bath of radiation? It was scientifically impossible.

We continued on more carefully. After a while, I turned off my headlamp and went out in front to see if I could see anything without the glare of the light. At first there was nothing, but as my eyes adjusted, something snagged my attention out of the corner of my eye. It was a faint, gauzy curtain—a net hanging in the air, glowing a dim blue-gray. It was impossible to tell how close it was—just before my face, or over the next hill? I swept my arm out to disturb it, but touched nothing. So either it was far away, or it was inside my head.

Something slapped my faceplate, and I recoiled. There was a smear of goo across my visor. I tried to wipe it off, and an awful smell from my breathing vent nearly gagged me. Behind me, Amal gave an exclamation, and I thought he had smelled it too, but when I turned to see, he was looking at his foot.

"I stepped on something," he said. "I could feel it crunch."

"What's that disgusting smell?" Davern said.

"Something slimed me," I answered.

"Keep on going, everyone," Edie said. "We can't stop to figure it out."

We plodded on, a slow herd surrounded by invisible tormentors. We had not gotten far before Amal had to stop because his boot was coming apart. We waited while he wrapped mending tape around it, but that lasted only half an hour before the sole of his boot was flapping free again. "I've got to stop and fix this, or my foot will freeze," he said.

We were all a little grateful to have an excuse to set up the tent and stop our struggle to continue. Once inside, we found that all of our coldsuits were pierced with small cuts and pinholes. We spent some time repairing them, then looked at each other to see who wanted to continue.

“What happens if we camp while Umber is in the sky, and only travel by day?” Edie finally asked.

I did a quick calculation. “It would add another 300 hours. We don’t have food to last.”

“If we keep going, our coldsuits will be cut to ribbons,” Davern said.

“If only we could see what’s attacking us!” Edie exclaimed.

Softly, Seabird said, “It’s ghosts.” We all fell silent. I looked at her, expecting it was some sort of joke, but she was deadly serious. “All those people who died,” she said.

At home, everyone would have laughed and mocked her. Out here, no one replied.

I pulled up the hood of my coldsuit and rose.

“Where are you going?” Davern said.

“I want to check out the lookthrough trees.” In reality, I wanted some silence to think.

“What a time to be botanizing!” Davern exclaimed.

“Shut up, Davern,” Amal said.

Outside, in the empty waste, I had a feeling of being watched. I shook it off. When we had camped, I had noticed that a nearby grove of lookthrough trees was glowing in the dark, shades of blue and green. I picked my way across the rocks toward them. I suspected that the fluorescence was an adaptation that allowed them to survive the hostile conditions of Umbernight, and I wanted some samples. When I reached the grove and examined one of the long, flat leaves under lamplight, it looked transparent, as usual. Shutting my lamp off, I held it up and looked through it. With a start, I pressed it to my visor so I could see through the leaf.

What looked like a rocky waste by the dim starlight was suddenly a brightly lit landscape. And everywhere I looked, the land bloomed with organic shapes unlike any I had ever seen. Under a rock by my feet was a low, domed mound pierced with holes like an overturned colander, glowing from within. Beneath the everlives were bread-loaf-shaped growths covered with plates that slid aside as I watched, to expose a hummocked mound inside. There were things with leathery rinds that folded out like petals to collect the unlight, which snapped shut the instant I turned on my lamp. In between the larger life-forms, the ground was crawling with smaller, insect-sized things, and in the distance I could see gauzy curtains held up by gas bladders floating on the wind.

An entire alternate biota had sprung to life in Umberlight. Dust was not just the barren place we saw by day, but a thriving dual ecosystem, half of which had been waiting as spores or seeds in the soil, to be

awakened by Umber's radiation. I knelt down to see why they had been so invisible. By our light, some of them were transparent as glass. Others were so black they blended in with the rock. By Umberlight, they lit up in bright colors, reflecting a spectrum we could not see.

I looked down at the leaf that had given me new sight. It probably had a microstructure that converted high-energy radiation into the visible spectrum so the tree could continue to absorb the milder wavelengths. Quickly, I plucked a handful of the leaves. Holding one to my visor, I turned back toward the tent. The UV-reflecting fabric was a dull gray in our light, but Umberlight made it shine like a beacon, the brightest thing in the landscape. I looked down at my coldsuit, and it also glowed like a torch. The things of Umberlight might be invisible to us, but we were all too visible to them.

When I came back into the tent, my companions were still arguing. Silently, I handed each of them a strip of leaf. Davern threw his away in disgust. "What's this, some sort of peace offering?" he said.

"Put on your coldsuits and come outside," I said. "Hold the leaves up to your faceplates and look through them."

Their reactions, when they saw the reality around us, were as different as they were: astonished, uneasy, disbelieving. Seabird was terrified, and shrank back toward the tent. "It's like nightmares," she said.

Edie put an arm around her. "It's better than ghosts," she said.

"No, it's not. It's the shadow side of all the living beings. That's why we couldn't see them."

"We couldn't see them because they don't reflect the spectrum of light our eyes absorb," Amal said reasonably. Seabird did not look comforted.

I looked ahead, down the road we needed to take. Umber was bright as an anti-sun. In its light, the land was not empty, but full. There was a boil of emerging life in every crack of the landscape: just not our sort of life. We were the strangers here, the fruits that had fallen too far from the tree. We did not belong.

You would think that being able to see the obstacles would speed us up, but not so. We were skittish now. With strips of lookthrough leaves taped to our visors, we could see both worlds, which were the same world; but we could not tell the harmless from the harmful. So we treated it all as a threat—dodging, detouring, clearing the road with a shovel when we could. As we continued, the organisms changed and multiplied fast around us, as if their growth were in overdrive. It was spring for them, and they were sprouting and spawning. What would they look like fully grown? I hoped not to find out.

I can't describe the life-forms of Umbernight in biological language, because I couldn't tell if I was looking at a plant, animal, or something in between. We quickly discovered what had been piercing our coldsuits—a plantlike thing shaped like a scorpion with a spring-loaded tail lined with barbs. When triggered by our movement, it would release a shower of pin-sharp projectiles. Perhaps they were poison, and our incompatible proteins protected us.

The road had sprouted all manner of creatures covered with plates and shells—little ziggurats and stepped pyramids, spirals, and domes. In between them floated bulbs like amber, airborne eggplants. They spurted a mucus that ate away any plastic it touched.

We topped a rise to find the valley before us completely crusted over with life, and no trace of a path. No longer could we avoid trampling through it, crushing it underfoot. Ahead, a translucent curtain suspended from floating, gas-filled bladders hung across our path. It shimmered with iridescent unlight.

"It's rather beautiful, isn't it?" Edie said.

"Yes, but is it dangerous?" Amal said.

"We're not prey," Anatoly argued. "This life can't get any nutrients from us."

"I doubt it knows that," I said. "It might just act on instinct."

"We could send the dog to find out," Anatoly suggested.

Sally showed no inclination. Edie had put her on a leash, but it was hardly necessary; she was constantly alert now, on guard.

"Go around it," I advised.

So we left our path to detour across land where the boulders had become hard to spot amid the riot of life. As Bucky's wheels crushed the shell of one dome, I saw that inside it was a wriggling mass of larvae. It was not a single organism, but a colony. That would explain how such complex structures came about so fast; they were just hives of smaller organisms.

We cleared a place to camp by trampling down the undergrowth and shoveling it out of the way. Exhausted as we were, it was still hard to sleep through the sounds from outside: buzzing, whooshing, scratching, scrabbling. My brain kept coming back to one thought: at this rate, our return would take twice as long as the journey out.

The tent was cold when we woke; our heater had failed. When Amal unfastened the tent flap he gave an uncharacteristically profane exclamation. The opening was entirely blocked by undergrowth. No longer cautious, we set about hacking and smashing our way out, disturbing hordes of tiny crawling things. When we had cleared a

path and turned back to look, we saw that the tent was surrounded by mounds of organisms attracted by its reflected light. The heater had failed because its air intake was blocked. Bucky, parked several yards away, had not attracted the Umberlife.

It was the coldest part of night, but Umber was high in the sky, and the life-forms had speeded up. We marched in formation now, with three fanned out in front to scan for obstructions, one in the center with Bucky, and two bringing up the rear. I was out in front with Seabird and Davern when we reached a hilltop and saw that the way ahead was blocked by a lake that had not been there on the way out. We gathered to survey it. It was white, like an ocean of milk.

“What is it?” Edie asked.

“Not water,” Anatoly said. “It’s too cold for that, too warm for methane.”

I could not see any waves, but there was an ebb and flow around the edges. “Wait here. I want to get closer,” I said.

Amal and Anatoly wouldn’t let me go alone, so the three of us set out. We were nearly on the beach edge before we could see it clearly. Amal came to an abrupt halt. “Spiders!” he said, repulsed. “It’s a sea of spiders.”

They were not spiders, of course, but that is the closest analog: long-legged crawling things, entirely white in the Umberlight. At the edges of the sea they were tiny, but farther out we could see ones the size of Sally, all seemingly competing to get toward the center of the mass. There must have been a hatching while we had slept.

“That is truly disgusting,” Anatoly said.

I gave a humorless laugh. “I’ve read about this on other planets—wildlife covering the land. The accounts always say it is a majestic, inspiring sight.”

“Umber turns everything into its evil twin,” Amal said.

As we stood there, a change was taking place. A wave was gathering far out. The small fry in front of us were scattering to get out of the way as it swept closer.

“They’re coming toward us,” Anatoly said.

We turned to run back toward the hill where we had left our friends. Anatoly and Amal reached the hilltop before I did. Edie shouted a warning, and I turned to see a knee-high spider on my heels, its pale body like a skull on legs. I had no weapon but my flashlight, so I nailed it with a light beam. To my surprise, it recoiled onto its hind legs, waving its front legs in the air. It gave me time to reach the others.

“They’re repelled by light!” I shouted. “Form a line and shine them off.”

The wave of spiders surged up the hill, but we kept them at bay with our lights. They circled us, and we ended up in a ring around Bucky, madly sweeping our flashlights to and fro to keep them off while Sally barked from behind us.

Far across the land, the horizon lit with a silent flash like purple lightning. The spiders paused, then turned mindlessly toward this new light source. As quickly as they had swarmed toward us, they were swarming away. We watched the entire lake of them drain, heading toward some signal we could not see.

“Quick, let’s cross while they’re gone,” I said.

We dashed as fast as we could across the plain where they had gathered. From time to time we saw other flashes of unlight, always far away and never followed by thunder.

In our haste, we let our vigilance lapse, and one of Bucky’s wheels thunked into a pothole. The other wheels spun, throwing up loose dirt and digging themselves in. I called out, “Bucky, stop!”—but he was already stuck fast.

“Let’s push him out,” Amal said, but I held up a hand. The buggy was already dangerously tilted.

“We’re going to have to unload some crates to lighten him up, and dig that wheel out.”

Everyone looked nervously in the direction where the spiders had gone, but Amal said, “Okay. You dig, we’ll unload.”

We all set to work. I was so absorbed in freeing Bucky’s wheel that I did not see the danger approaching until Seabird gave a cry of warning. I looked up to see one of the gauzy curtains bearing down on us from windward. It was yards wide, big enough to envelop us all, and twinkling with a spiderweb of glowing threads.

“Run!” Amal shouted. I dropped my shovel and fled. Behind me, I heard Edie’s voice crying, “Sally!” and Amal’s saying, “No, Edie! Leave her be!”

I whirled around and saw that the dog had taken refuge under the buggy. Edie was running back to get her. Amal was about to head back after Edie, so I dived at his legs and brought him down with a thud. From the ground we both watched as Edie gave up and turned back toward us. Behind her, the curtain that had been sweeping toward Bucky changed direction, veering straight toward Edie.

“Edie!” Amal screamed. She turned, saw her danger, and froze.

The curtain enveloped her, wrapping her tight in an immobilizing net. There was a sudden, blinding flash of combustion. As I blinked the after-spots away, I saw the curtain float on, shredded now, leaving behind a charcoal pillar in the shape of a woman.

Motionless with shock, I gazed at that black statue standing out against the eastern sky. It was several seconds before I realized that the sky was growing bright. Beyond all of us, dawn was coming.

In the early morning light Anatoly and I dug a grave while Seabird and Davern set up the tent. We simply could not go on. Amal was shattered with grief, and could not stop sobbing.

“Why her?” he would say in the moments when he could speak at all. “She was the best person here, the best I’ve ever known. She shouldn’t have been the one to die.”

I couldn’t wash those last few seconds out of my brain. Why had she stopped? How had that brainless, eyeless thing sensed her?

Later, Amal became angry at me for having prevented him from saving her. “Maybe I could have distracted it. It might have taken me instead of her.”

I only shook my head. “We would have been burying both of you.”
“That would have been better,” he said.

Everyone gathered as we laid what was left of her in the ground, but no one had the heart to say anything over the grave. When we had filled it in, Sally crept forward to sniff at the overturned dirt. Amal said, “We need to mark it, so we can find it again.” So we all fanned out to find rocks to heap in a cairn on the grave.

We no longer feared the return of the spiders, or anything else, because the Umberlife had gone dormant in the sun—our light being as toxic to them as theirs was to us. Everything had retreated into their shells and closed their sliding covers. When we viewed them in our own light they still blended in with the stones of the crater floor.

We ate and snatched some hours of sleep while nothing was threatening us. I was as exhausted as the others, but anxious that we were wasting so much daylight. I roused them all before they were ready. “We’ve got to keep moving,” I said.

We resumed the work of freeing Bucky where we had left off. When all was ready, we gathered behind him to push. “Bucky, go!” I ordered. His wheels only spun in the sand. “Stop!” I ordered. Then, to the others, “We’re going to rock him out. Push when I say go, and stop when I say stop.” When we got a rhythm going, he rocked back and forth three times, then finally climbed out of the trench that had trapped him.

Amal helped us reload the buggy, but when it came time to move on, he hung back. “You go ahead,” he said. “I’ll catch up with you.”

“No way,” I said. “We all go or none of us.”

He got angry at me again, but I would not let him pick a fight. We let him have some moments alone at the grave to say goodbye. At last I walked up to him and said, "Come on, Amal. We've got to keep moving."

"What's the point?" he said. "The future is gone."

But he followed me back to where the others were waiting.

He was right, in one way: nothing we could achieve now would make up for Edie's loss. How we were going to carry on without her, I could not guess.

When we camped, there was no music now, and little conversation. The Winding Wall was a blue line ahead in the distance, and as we continued, it rose, ever more impassable, blocking our way. We did not reach the spot where the gully path pierced it until we had been walking for thirteen hours. We were tired, but resting would waste the last of the precious sunlight. We gathered to make a decision.

"Let's just leave the buggy and the crates, and make a run for home," Amal said. He looked utterly dispirited.

Davern and Seabird turned to Anatoly. He was the only one of us who was still resolute. "If we do that, we will have wasted our time," he said. "We can't give up now."

"That's right," Davern said.

Amal looked at me. There was some sense in his suggestion, but also some impracticality. "If we leave the buggy we'll have to leave the tent," I said. "It's too heavy for us to carry." We had been spreading it as a tarpaulin over the crates when we were on the move.

"We knew from the beginning that the wall would be an obstacle," Anatoly said with determination. "We have to make the effort."

I think even Amal realized then that he was no longer our leader.

We unloaded the buggy, working till we were ready to drop, then ate and fell asleep on the ground. When we woke, the sun was setting. It seemed too soon.

Each crate took two people to carry up the steep path. We decided to do it in stages. Back and forth we shuttled, piling our cargo at a level spot a third of the way up. The path was treacherous in the dark, but at least the work was so strenuous we had no need of coldsuits until Umber should rise.

The life-forms around us started waking as soon as dark came. It was the predawn time for them, when they could open their shells and exhale like someone shedding a coldsuit. They were quiescent enough that we were able to avoid them.

Fifteen hours later, our cargo was three-quarters of the way up, and we gathered at the bottom again to set up the tent and rest before trying

to get Bucky up the path. The X-ray alarm went off while we were asleep, but we were so tired we just shut it off and went on sleeping.

When we rose, an inhuman architecture had surrounded our tent on all sides. The Umberlife had self-organized into domes and spires that on close inspection turned out to be crawling hives. There was something deformed and abhorrent about them, and we were eager to escape our transformed campsite—until Seabird gave a whimper and pointed upward.

Three hundred meters above, the top of the Winding Wall was now a battlement of living towers that glowed darkly against the sky. Shapes we couldn't quite make out moved to and fro between the structures, as if patrolling the edge. One fat tower appeared to have a rotating top that emitted a searchlight beam of far-ultraviolet light. It scanned back and forth—whether for enemies or for prey we didn't know.

We realized how conspicuous we were in our glowing coldsuits. "I'd give up breakfast for a can of black paint," I said.

"Maybe we could cover ourselves with mud?" Davern ventured.

"Let's get out of here first," Anatoly said.

The feeling that the land was aware of us had become too strong.

Getting Bucky up the steep trail was backbreaking work, but whenever we paused to rest, Umberlife gathered around us. The gully was infested with the plant-creatures that had once launched pins at us; they had grown, and their darts were the size of pencils now. We learned to trigger them with a beam from our flashlights. Every step required a constant, enervating vigilance.

When we had reached the place where we left the crates and stopped to rest, I announced that I was going to scout the trail ahead. No one else volunteered, so I said, "Amal, come with me. Seabird, hold onto the dog."

Amal and I picked our way up the steep trail, shining away small attackers. I saw no indication that the Umberlife had blocked the path. When we reached the top and emerged onto the plateau, I stood looking around at the transformed landscape. At my side, Amal said, "Oh my God."

The Damn Right Barrens were now a teeming jungle. Everywhere stood towering, misshapen structures, competing to dominate the landscape. An undergrowth of smaller life clogged the spaces in between. Above, in the Umberlit sky, floated monstrous organisms like glowing jellyfish, trailing tentacles that sparked and sizzled when they touched the ground. Ten or twelve of the lighthouse towers swept their searching beams across the land. There was not a doubt in my mind that this landscape was brutally aware.

I spotted some motion out of the corner of my eye, but when I turned to see, nothing was there. I thought: only predators and prey need to move fast.

“Look,” Amal said, pointing. “Weird.”

It was a ball, perfectly round and perhaps a yard in diameter, rolling along the ground of its own accord. It disappeared behind a hive-mound and I lost track of it.

We had turned to go back down the ravine when one of the searchlight beams swept toward us, and we ducked to conceal ourselves behind a rock. Amal gave an exclamation, and I turned to see that we were surrounded by four of the rolling spheres. They seemed to be waiting for us to make a move, so I pointed my flashlight at one. Instantly, it dissolved into a million tiny crawlers that escaped into the undergrowth. The other spheres withdrew.

“They’re coordinating with the beacons,” I hissed at Amal. “Hunting cooperatively?”

“This place is evil,” he said.

We dashed toward the head of the gully. Too late, I spotted ahead the largest dart-thrower plant I had ever seen. The spring-loaded tail triggered, releasing its projectiles. I dove to one side. Amal was not quick enough, and a spine the size of an arrow caught him in the throat. He clutched at it and fell to his knees. Somehow, I managed to drag him forward till we were concealed in the gully.

The dart had pierced his neck through, and was protruding on the other side. There was no way to give him aid without taking off his coldsuit. He was struggling to breathe. I tried to lift his hood, but the dart was pinning it down. So I said, “Brace yourself,” and yanked the shaft out. He gave a gurgling cry. When I got his hood off, I saw it was hopeless. The dart had pierced a vein, and his coldsuit was filling with dark blood. Still, I ripped at his shirt and tried to bind up the wound until he caught at my hand. His eyes were growing glassy, but his lips moved.

“Leave it,” he said. He was ready to die.

I stayed there, kneeling over him as he stiffened and grew cold. My mind was a blank, until suddenly I began to cry. Not just for him—for Edie as well, and for their unborn children, and all the people who would never be gladdened by their presence. I cried for the fact that we had to bury them in this hostile waste, where love and comfort would never touch them again. And I cried for the rest of us as well, because the prospect of our reaching home now seemed so dim.

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When Anatoly and I brought the shovel back to the place where I had left Amal, there was nothing to bury. Only an empty coldsuit and a handful of teeth were left on the ground; all other trace of him was gone. Anatoly nudged the coldsuit with his foot. "Should we bury this?"

Macabre as it sounded, I said, "We might need it."

So we brought it back to our camp. We let the others think we had buried him.

We convened another strategy session. I said, "Amal had it right. We need to make a run for it. To hell with the cargo and the buggy. Leave the tent here; it only draws attention to us. We need to travel fast and light."

But Anatoly was still animated by the inspiration of our mission. "We can still succeed," he said. "We're close; we don't need to give up. We just have to outthink this nightmare."

"Okay, how?"

"We bring everything to the head of the gully and build a fort out of the crates. Then we wait till day comes, and make a dash for it while the Umberlife is sleeping."

"We can only get as far as the Mazy Lakes before night," I said.

"We do the same thing over again—wait out Umbernight. Food's no longer such a problem, with two less people."

I saw true faith in Seabird's eyes, and calculated self-interest in Davern's. Anatoly was so decisive, they were clearly ready to follow him. Perhaps that was all we needed. Perhaps it would work.

"All right," I said. "Let's get going."

We chose a site for our fort in the gully not far from where Amal had died. When it was done, it was a square enclosure of stacked crates with the tent pitched inside. I felt mildly optimistic that it would work. We slept inside it before bringing Bucky up. Then we waited.

There were sounds outside. Sally's warning growls made us worry that something was surrounding us to make an attack, so we set four of our lanterns on the walls to repel intruders, even though it used up precious battery life.

Hours of uneasiness later, dawn came. We instantly broke down the fort and found that the lamps had done their job, since there was a bare circle all around us. We congratulated ourselves on having found a way to survive.

The daylight hours were a mad dash across the Damn Right. We had to clear the way ahead of Bucky, and we took out our anger on the hibernating Umberlife, leaving a trail of smashed shells and toppled towers. We reached the edge of the lakes at sunset, and instantly saw that our plan would not work.

Around the edge of the wetland stood a dense forest of the tallest spires we had yet seen, easily dominating any fort walls we could build. There would be no hope of staying hidden here.

At the edge of the lake, the blooming abundance of horrors stopped, as if water were as toxic to them as light. "If only we had a boat!" Anatoly exclaimed. But the life around us did not produce anything so durable as wood—even the shells were friable.

The light was fading fast. Soon, this crowded neighborhood would become animate. Ahead, a narrow causeway between two lakes looked invitingly empty. If only we could make it to a campsite far enough from shore, we could build our fort and wait out the night.

"Let me get out my maps and check our route first," I said.

Davern gave an exclamation of impatience, but Anatoly just said, "Hurry up."

We were on the side of the Mazy Lakes where my maps were less complete. On the outward journey, we had cut across the ice; but now, after forty hours of daylight, that was not an option. I was certain of only one route, and it seemed to take off from shore about five miles away. I showed it to the others.

Davern still wanted to follow the route ahead of us. "We can just go far enough to camp, then come back next day," he argued. "We've already been walking twelve hours."

"No. We're not going to make any stupid mistakes," I said.

Anatoly hesitated, then said, "It's only five miles. We can do that."

But five miles later, it was completely dark and almost impossible to tell the true path from a dozen false ones that took off into the swamp whenever I shone my lamp waterward. I began to think perhaps Davern had been right after all. But rather than risk demoralizing everyone, I chose a path and confidently declared it the right one.

It was a low and swampy route, ankle-deep in water at times. I went out ahead with a tent pole to test the footing and scout the way. The sound of Davern complaining came from behind.

As soon as we came to a relatively dry spot, we set up the tent, intending to continue searching for a fort site after a short rest. But when we rose, Bucky had sunk six inches into the mud, and we had to unload half the crates before we could push him out. By the time we set out again, we were covered with mud and water.

"Now we can try Davern's plan of covering our coldsuits with mud," I said.

"We don't have much choice," Davern muttered.

Umbrose rose before we found a place to stop. Then we discovered

that the lakes were not lifeless at all. By Umberlight, the stromatolites fluoresced with orange and black stripes. In spots, the water glowed carmine and azure, lit from underneath. We came to a good camping spot by a place where the lake bubbled and steam rose in clouds. But when the wind shifted and blew the steam our way, we nearly choked on the ammonia fumes. We staggered on, dizzy and nauseous.

The fort, I realized, was a solution to yesterday's problem. Staying put was not a good idea here, where we could be gassed in our sleep. We needed to be ready to move at a moment's notice.

Geysers of glowing, sulphur-scented spray erupted on either side of our path. We headed for a hummock that looked like a dry spot, but found it covered by a stomach-turning layer of wormlike organisms. We were forced to march through them, slippery and wriggling underfoot. As we crushed them, they made a sound at a pitch we couldn't hear. We sensed it as an itchy vibration that made us tense and short-tempered, but Sally was tormented till Seabird tied a strip of cloth over the coldsuit around her ears, making her look like an old woman in a scarf.

I didn't say so, but I was completely lost, and had been for some time. It was deep night and the water was freezing by now, but I didn't trust ice that glowed, so I stayed on the dwindling, switchback path. We were staggeringly weary by the time we reached the end of the road: on the tip of a peninsula surrounded by water. We had taken a wrong turn.

We stood staring out into the dark. It was several minutes before I could bring myself to say, "We have to go back."

Seabird broke down in tears, and Davern erupted like a geyser. "You were supposed to be the great guide and tracker, and all you've done is lead us to a dead end. You're totally useless."

Somehow, Anatoly summoned the energy to keep us from falling on each others' throats. "Maybe there's another solution." He shone his light out onto the lake. The other shore was clearly visible. "See, there's an ice path across. The whole lake isn't infested. Where it's black, the water's frozen solid."

"That could be just an island," I said.

"Tell you what, I'll go ahead to test the ice and investigate. You follow only if it's safe."

I could tell he was going to try it no matter what I said, so I made him tie a long rope around his waist, and anchored it to Bucky. "If you fall through, we'll pull you out," I said.

He stepped out onto the ice, testing it first with a tent pole. The weakest spot of lake ice is generally near shore, so I expected it to crack there if it was going to. But he got past the danger zone and kept

going. From far out on the ice, he flashed his light back at us. “The ice is holding!” he called. “Give me more rope!”

There wasn’t any more rope. “Hold on!” I called, then untied the tether from Bucky and wrapped it around my waist. Taking a tent pole, I edged out onto the ice where he had already crossed it. I was about thirty meters out onto the lake when he called, “I made it! Wait there.”

He untied his end of the rope to explore the other side. I could not see if he had secured it to anything in case I fell through, so I waited as motionlessly as I could. Before long, he returned. “I’m coming back,” he yelled.

I was a few steps from shore when the rope pulled taut, yanking me off my feet. I scrambled up, but the rope had gone limp. “Anatoly!” I screamed. Seabird and Davern shone their lights out onto the ice, but Anatoly was nowhere to be seen. I pulled in the rope, but it came back with only a frayed end.

“Stay here,” I said to the others, then edged gingerly onto the ice. If he was in the water, there was a short window of time to save him. But as I drew closer to the middle, the lake under me lit up with mesmerizing colors. They emanated from an open pool of water that churned and burped.

The lake under the black ice had not been lacking in life. It had just been hungry.

When I came back to where the others were waiting, I shook my head, and Seabird broke into hysterical sobs. Davern sat down with his head in his hands.

I felt strangely numb, frozen as the land around us. At last I said, “Come on, we’ve got to go back.”

Davern looked at me angrily. “Who elected *you* leader?”

“The fact that I’m the only one who can save your sorry ass,” I said.

Without Anatoly’s animating force, they were a pitiful sight—demoralized, desperate, and way too young. Whatever their worth as individuals, I felt a strong compulsion to avenge Anatoly’s death by getting them back alive. In this land, survival was defiance.

I ordered Bucky to reverse direction and head back up the path we had come by. Seabird and Davern didn’t argue. They just followed.

We had been retracing our steps for half an hour when I noticed a branching path I hadn’t seen on the way out. “Bucky, stop!” I ordered. “Wait here,” I told the others. Only Sally disobeyed me, and followed.

The track headed uphill onto a ridge between lakes. It had a strangely familiar look. When I saw Sally smelling at a piece of discarded trash, I recognized the site of our campsite on the way out. I stood in silence,

as if at a graveyard. Here, Amal had played his mandolin and Anatoly had imagined songs of Umbernight. Edie had made Sally's coldsuit.

If we had just gone back instead of trying to cross the ice, we would have found our way.

I returned to fetch my companions. When Seabird saw the place, memories overwhelmed her and she couldn't stop crying. Davern and I set up the tent and heater as best we could, and all of us went inside.

"It's not fair," Seabird kept saying between sobs. "Anatoly was trying to save us. He didn't do anything to deserve to die. None of them did."

"Right now," I told her, "your job isn't to make sense of it. Your job is to survive."

Inwardly, I seethed at all those who had led us to expect the world to make sense.

We were ten hours away from the edge of the lakes, thirty hours of walking from home. Much as I hated to continue on through Umbernight, I wanted to be able to make a dash for safety when day came. Even after sleeping, Seabird and Davern were still tired and wanted to stay. I went out and shut off the heater, then started dismantling the tent to force them out.

The lakes glowed like a lava field on either side of us. From time to time, billows of glowing, corrosive steam enveloped us, and we had to hold our breaths till the wind shifted. But at least I was sure of our path now.

The other shore of the Mazy Lakes, when we reached it, was not lined with the towers and spires we had left on the other side; but when we pointed our lights ahead, we could see things scattering for cover. I was about to suggest that we camp and wait for day when I felt a low pulse of vibration underfoot. It came again, rhythmic like the footsteps of a faraway giant. The lake organisms suddenly lost their luminescence. When I shone my light on the water, the dark surface shivered with each vibration. Behind us, out over the lake, the horizon glowed.

"I think we ought to run for it," I said.

The others took off for shore with Sally on their heels. "Bucky, follow!" I ordered, and sprinted after them. The organisms on shore had closed up tight in their shells. When I reached the sloping bank, I turned back to look. Out over the lake, visible against the glowing sky, was a churning, coal-black cloud spreading toward us. I turned to flee.

"Head uphill!" I shouted at Davern when I caught up with him. Seabird was ahead of us; I could see her headlamp bobbing as she ran. I called her name so we wouldn't get separated, then shoved Davern ahead of me up the steep slope.

We had reached a high bank when the cloud came ashore, a toxic tsunami engulfing the low spots. Bucky had fallen behind, and I watched as he disappeared under the wave of blackness. Then the chemical smell hit, and for a while I couldn't breathe or see. By the time I could draw a lungful of air down my burning throat, the sludgy wave was already receding below us. Blinking away tears, I saw Bucky emerge again from underneath, all of his metalwork polished bright and clean. The tent that had been stretched over the crates was in shreds, but the crates themselves looked intact.

Beside me, Davern was on his knees, coughing. "Are you okay?" I asked. He shook his head, croaking, "I'm going to be sick."

I looked around for Seabird. Her light wasn't visible anymore. "Seabird!" I yelled, desperate at the thought that we had lost her. To my immense relief, I heard her voice calling. "We're here!" I replied, and flashed my light.

Sounds of someone approaching came through the darkness, but it was only Sally. "Where is she, Sally? Go find her," I said, but the dog didn't understand. I swept my light over the landscape, and finally spotted Seabird stumbling toward us without any light. She must have broken hers in the flight. I set out toward her, trying to light her way.

The Umberlife around us was waking again. Half-seen things moved just outside the radius of my light. Ahead, one of the creature-balls Amal and I had seen on the other side was rolling across the ground, growing as it moved. It was heading toward Seabird.

"Seabird, watch out!" I yelled. She saw the danger and started running, slowed by the dark. I shone my light on the ball, but I was too far away to have an effect. The ball speeded up, huge now. It overtook her and dissolved into a wriggling, scrabbling, ravenous mass. She screamed as it covered her, a sound of sheer terror that rose into a higher pitch of pain, then cut off. The mound churned, quivered repulsively, grew smaller, lost its shape. By the time I reached the spot, all that was left was her coldsuit and some bits of bone.

I rolled some rocks on top of it by way of burial.

Davern was staring and trembling when I got back to him. He had seen the whole thing, but didn't say a word. He stuck close to me as I led the way back to Bucky.

"We're going to light every lamp we've got and wait here for day," I said.

He helped me set up the lights in a ring, squandering our last batteries. We sat in the buggy's Umbershadow and waited for dawn with Sally at our feet. We didn't say much. I knew he couldn't stand me, and I had only contempt for him; but we still huddled close together.

To my surprise, Bucky was still operable when the dawn light revived his batteries. He followed as we set off up the Let's Go Valley, once such a pleasant land, now disfigured with warts of Umberlife on its lovely face. We wasted no time on anything but putting the miles behind us.

The sun had just set when we saw the wholesome glow of Feynman Habitat's yard light ahead. We pounded on the door, then waited. When the door cracked open, Davern pushed past me to get inside first. They welcomed him with incredulous joy, until they saw that he and I were alone. Then the joy turned to shock and grief.

There. That is what happened. But of course, that's not what everyone wants to know. They want to know *why* it happened. They want an explanation—what we did wrong, how we could have succeeded.

That was what the governing committee was after when they called me in later. As I answered their questions, I began to see the narrative taking shape in their minds. At last Anselm said, "Clearly, there was no one fatal mistake. There was just a pattern of behavior: naïve, optimistic, impractical. They were simply too young and too confident."

I realized that I myself had helped create this easy explanation, and my remorse nearly choked me. I stood up and they all looked at me, expecting me to speak, but at first I couldn't say a word. Then, slowly, I started out, "Yes. They were all those things. Naïve. Impractical. Young." My voice failed, and I had to concentrate on controlling it. "That's why we needed them. Without their crazy commitment, we would have conceded defeat. We would have given up, and spent the winter hunkered down in our cave, gnawing our old grudges, never venturing or striving for anything beyond our reach. Nothing would move forward. We needed them, and now they are gone."

Later, I heard that the young people of Feynman took inspiration from what I said, and started retelling the story as one of doomed heroism. Young people like their heroes doomed.

Myself, I can't call it anything but failure. It's not because people blame me. I haven't had to justify myself to anyone but this voice in my head—always questioning, always nagging me. I can't convince it: everyone fails.

If I blame anyone, it's our ancestors, the original settlers. We thought their message to us was that we could always conquer irrationality, if we just stuck to science and reason.

Oh, yes—the settlers. When we finally opened the crates to find out what they had sent us, it turned out that the payload was books. Not data—paper books. Antique ones. Art, philosophy, literature. The books

had weathered the interstellar trip remarkably well. Some were lovingly inscribed by the settlers to their unknown descendants. Anatoly would have been pleased to know that the people who sent these books were not really rationalists—they worried about our aspirational well-being. But the message came too late. Anatoly is dead.

I sit on my bed stroking Sally's head. What do you think, girl? Should I open the book from my great-grandmother?

ABOUT THE AUTHOR

Carolyn Ives Gilman is currently celebrating her decision to quit her job in order to write more science fiction. She has written two novels and five stories in the loosely connected Twenty Planets universe. Her books include *Dark Orbit*, a space exploration adventure; *Isles of the Forsaken* and *Ison of the Isles*, a two-book fantasy about culture clash and revolution; and *Halfway Human*, a novel about gender and oppression. Her short fiction has appeared in *Clarkesworld*, *Fantasy and Science Fiction*, *The Year's Best Science Fiction*, *Lightspeed*, *Interzone*, *Universe*, *Full Spectrum*, *Realms of Fantasy*, and others. She has been nominated for the Nebula Award three times and for the Hugo twice.

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The Power is Out

A QUE, TRANSLATED BY ELIZABETH HANLON

1

“Let’s go south,” Zhang Handsome suddenly said to us one day.

We were out walking in the twilight, ambling about, idle and listless. Several stray birds careened blindly between the high-rises. Zhao Fortune watched them and licked his lips: “I haven’t tasted meat in a long time. Let’s shoot those birds down and eat them.”

Beside him, Chen Beauty furrowed her decidedly unbeautiful brow and said, “Brother Fortune, *no*. How could you eat those little birdies?” The rest of us also voiced our disapproval of his suggestion.

Fortune gazed absently up at the birds. “I remember when I was a boy—that was before the Trip—I used to eat this kind of bird cooked over a fire. Small as they are, the meat is plentiful and tender. When roasted, grease drips from the meat onto the ground, and sizzles in the mud. Catch it in your mouth, and it sizzles in your heart.”

He looked back at us over his shoulder. “Are you going to help or not?”

We picked up stones off the ground and threw them at the birds. Of the five of us, Fortune and I were the strongest. Handsome was lean and gaunt, but he could throw stones as high as seven or eight stories. Beauty and Wang Innocence only caused a commotion. Their stones did not ruffle a single feather on any of the birds, and their incessant shouting made the people upstairs open their windows. They poked their heads out, like mushrooms, and regarded us curiously.

As our stones grazed the birds, they flapped their wings furiously. Already disoriented by the geomagnetic storm, and now hounded by us, their panic grew, and they crashed into each other as they flew away. We tore through the rundown streets in hot pursuit.

I guessed that the perpetual geomagnetic agitation had played havoc

with these birds: as they flew, they kept colliding with walls and glass windows. By chance, several of the birds got away; only one bird, flying straight ahead, could not shake us. After a while we began to flag. The bird, whose wings had been struck several times, was also tired. It landed on a fourth-floor balcony, huddled on its side, and gently preened its injured wings. Its posture as it licked its wounds was extremely graceful, like a gilded sculpture in the setting sun. We stared at it, mesmerized.

“Maybe we shouldn’t eat it,” suggested Innocence. We all nodded. Even Fortune did not lick his lips, just gazed absently at it, as though remembering the days before the power went out.

“All right,” he said. “Let it fly away. Its home is the sky. It should spread its wings and return—”

Before he could finish, an old man rushed out onto the balcony, grabbed the stunned bird, and stuffed it into his mouth. He chewed vigorously, his filthy beard stained with bright red blood.

Outraged, we shouted and swore at the old man, especially Handsome, who hopped from one foot to the other as he cursed. The old man, picking feathers from his teeth, returned our compliments in a hoarse, raw voice. Old age had imbued his profanity with a marvelous artistic quality. Even Handsome, who had read loads of books, could not surpass him. Fortune snatched up a stone and threw it at the balcony, but the old man hurriedly ducked inside. The five of us stomped up the stairs and did our best to kick the old devil’s door down. However, the alloyed steel security door was far stronger than our feet and our busted shoes, and after ten minutes or so, Fortune let out a yelp, having wrenched his calf.

The entire time, the old man stood behind the door and inquired after our distant relatives with elegant and polished obscenities, utterly calm and composed.

As the sky outside began to darken, the hallway grew as still and gloomy as a tomb. We grudgingly abandoned our assault on the security door and helped Fortune down the stairs. The street was filled with figures loitering in groups of three and four. Like us, they ambled about, idle and listless. Fortune limped along, cursing nonstop. The wind rose, carrying a sharp chill, and we tightened our collars against it.

Tucking her chin against her chest, Innocence said, “Autumn will be over soon.”

Handsome suddenly jerked his head up. “Yes, autumn will be over, and winter will come. Let’s go south.”

I grew excited. South, a word at once so strange, and yet so familiar. Since the power went out, I had lived in this northern city for so many years that I’d forgotten what my hometown looked like. I thought of the

birds' sudden appearance and realized that they were likely headed south for the winter, too. Even though the geomagnetic storm had muddled their sense of direction, the desire in their genes for warmth still guided them.

Fortune hesitated for a moment. "Go south and do what?" he asked. "Who knows what the situation there is like? It could be even more chaotic than here."

"Not necessarily," said Beauty. "Southerners have mild tempers, unlike you northerners. After the power went out, I bet everyone came together like one big family to tide over the difficulties."

"Beauty, ah, Beauty," Fortune sneered. "Do you believe your own words?"

Beauty turned to look at me. "Mediocre, why aren't you saying anything? Tell us, are southerners kinder than northerners? I recall your family's from the south. Is it true if someone strikes you, you won't hit back? If someone slaps you on the left cheek, you offer up your right cheek?"

"Screw you," I said. "If someone tries that with me, I'll sit my ass cheeks on their face."

As we argued, Innocence kept her head lowered. Her wispy bangs hung over her face.

Handsome broke in: "Listen to me—Mediocre, let go of Beauty's hair—winter is coming, and I've been watching the weather. The Siberian High is descending toward us, and cold winds are sweeping in from the Pacific. I'm afraid temperatures may reach thirty below zero this winter. The heat's gone, and we've run out of things to burn. We can't endure that kind of weather. Let's go south."

"Handsome, quit lying to us," said Fortune. "Don't think I won't hit you because you're good-looking."

"You can believe it or not, I don't care—ouch, don't hit me! Mediocre, stop him!"

I hastily turned to Fortune. "Handsome has read a lot of books, and he is bursting with knowledge. He knows Hooke's Law and the Newton-Leibniz formula. What he said is probably true."

Handsome and Fortune have never gotten along. Even before the Trip, the rich scorned young fair faces, and handsome young men despised unscrupulous businessmen. In the years since the power went out and the five of us took up together, they would have killed each other if I hadn't smoothed things over between them.

Fortune leaned against the wall and looked into the distance, where darkness was seeping in. "Truly that cold?" he asked. "But, these last few years, haven't we always made it through?"

“A few degrees below zero is tolerable, but thirty below is not,” I said. “Even if we ate our fill of bread every day, we couldn’t withstand the cold.”

Beauty and Innocence wore worried expressions.

Suddenly, a gleam appeared in Fortune’s eyes. “Very well,” he said, “we’ll go south!”

I knew Zhao Fortune long before the Trip. Back then, he was not yet called Fortune, and instead went by a name frequently published in business journals. Oh, that’s right—he was my boss at a promising startup located in the city’s central business district. Every morning, he sipped a cup of coffee and peered through the window blinds at the ant-like crowds below. Sometimes he called me over, lit a cigarette, and pointed to the bustling suits.

“People,” he told me, shrouded in a cloud of smoke, “have to have money.”

Before Fortune had money, I was already firmly in his camp. I watched him grow from a diffident youth who cheated investors in coffee shops, into a paunchy middle-aged man with great clout in business circles. The intervening years were filled with twists and turns. Several times, the company teetered on the edge of bankruptcy, and in its darkest hour, only he and I remained. In fact, I was just lazy, and planned to wait until I was well and truly unemployed to find another job. But Fortune was extremely grateful, and said he would never forget me. If he had anything to eat, I would not go hungry. He brought me along everywhere—where he went, I went. Later, when things turned around, he did not break his promise. He gave me a stake in the company and paid me annual dividends, and the figures in my bank account grew larger than I dared believe.

Then, without warning, a strong pulse of electromagnetic radiation from outer space swept across the globe and did not disperse. All electronic equipment was damaged beyond repair.

The world had tripped a switch.

Our money, alongside a vast sea of data, vanished. Our savings were gone. Our high-performing stocks were gone. The connections we had cultivated over many years were gone. I was devastated by the loss, but Fortune stayed true to his name. While everyone else passed through the stages of waiting, restlessness, rioting, despair, and numbness, he began to quietly stockpile food and water. He cleaned out several supermarkets, hauled the goods off to who knows where, and then waited. He often described to me how he had managed it:

“Fuck,” he said, “the noise outside was awful. Smashing, and killing. I hid in the sewers. Blood dripped down, and I could taste the salt on

my hands. For just a small bag of stale bread, they were ready to stab each other. But I wasn't scared. I knew the things I'd hidden would save my life later. Lying in the middle of all that food, my heart was at ease, and I even fell asleep. When I woke up, I climbed up to the street, and there were bodies fucking everywhere."

I didn't admire Fortune's daring—after all, I too survived the riots. What I admired was his foresight. In civilized times, this man was able to predict the movement of wealth; after the world lapsed back into barbarism, he was able to quickly swap hats and divine changes in the fabric of society. By comparison, I was just one face among the masses on the street. When others waited, I waited. When others rioted, I rioted. When others grew numb, I grew numb. Therefore, I was called Li Mediocre.

Later, while Innocence and I were wandering idly through the streets, we ran into Fortune, who was similarly occupied. He recognized me, and the three of us began to walk together to look for food. When our hunger truly became unbearable, he would tell us to wait, disappear for a short while, and return with bottles of water and bread in hand. Watching us wolf down the bread, he'd sigh and say, "People have to have money." When we finished eating, he would take back the plastic bread bags. After Beauty and Handsome joined us, Fortune continued to provide this timely relief—somewhere he had built a great treasury filled with water and food. Because of this, he was conferred the highest status within our little group.

Having agreed to go south, we split up to pack our things, but Fortune called me back.

"Come with me," he said.

Together, Fortune and I walked through the city streets, surrounded by darkness. Once this kind of behavior was very dangerous, as someone crazed with hunger was liable to come rushing out onto the street at any time. But now, many small gangs had formed and held each other in check, and a short peace had been established. At night people rested, and saved fighting for the daytime. As we walked, the stars gradually came into view.

Fortune led me to every nook and corner on the block. He had hidden tightly tied black plastic bags beneath floorboards, behind ruined walls, even in trees. He pulled the bags from their hiding places and tossed them to me. As I caught them, I could feel the food inside through the plastic.

Finally, carrying a dozen plastic bags each on our backs, we came to a subway station. The station's entrance was overgrown with weeds

and branches, like arms sticking out of a grave, waving gleefully. Yes, since the Trip, no one had suffered more than humanity, and no one was happier than the plants. Humans had once driven them out, but after the electricity was gone, they swept back in, encircling the city from the countryside.

We pushed aside the brush and made our way down the corroded escalator, the starlight fading away behind us. It grew so dark that I could not see my hand in front of my face. Suddenly, a circle of light appeared in front of me, which, though dim, allowed me to see the path ahead.

“Keep up,” said Fortune, without halting his steps.

I saw then that the light came from a match in his hand. “When did you squirrel that away?” I asked excitedly. I hadn’t seen artificial light in many years. “Fortune, you’re really very handy.”

“Bah,” Fortune said as he walked. “The day the power goes out, light, food, and water are the things people want most for. While all of you were foolishly waiting for everything to go back to normal, I was getting ready.”

The flame flickered and danced on the tiny matchstick. Bathed in its faint halo, I felt as though we were being towed along by a dying, luminescent jellyfish, drifting slowly into the depths of the sea. A train was stopped at the tunnel entrance. Its doors had been prized open, and the interior was in shambles. Clearly, the train had pulled into the station at the exact moment of the Trip, and the passengers inside had forced open the doors to escape.

When the match went out, Fortune lit another.

“Don’t go in,” he instructed. He led me past the train, jumped down onto the track, and followed the rails into the tunnel. As the light moved across the huge metal car beside us, it illuminated its dull, mottled surface, like the rotted carcass of a whale. Trembling with fright, I followed the tracks deeper and deeper. I’m not sure how long we walked before Fortune stopped. He pointed to a small metal door in the subway tunnel and said, “Stick those in there.”

Originally, the room behind the door had been used to store subway inspection equipment, but now it was crammed with bulging plastic bread bags. After we wedged the plastic bags inside, Fortune shut the door and breathed a sigh of relief. “Let’s go,” he said. “We’ve got another trip to make.”

Fortune had hidden parcels of food all around the city, to be used as lifelines in case of emergency. That night I helped him make five or six runs in total. Around midnight, I told him I was tired and wanted to go home to rest.

“That’s fine.” Fortune nodded at me. Then he added, “Don’t tell the others about this place.”

“Why did you come to me for help?” I asked.

“You’re my employee,” he said. “Don’t worry, I’m going to take you south with me.”

Before I left, he tossed me a plastic bag for my breakfast the next day. In fact, I had not eaten breakfast in a long time. Every morning I was woken by hunger. My body had grown used to it, but my stomach began to protest. At the thought of waking up tomorrow morning to bread and fresh water, my heart was filled with indescribable contentment. I tucked the bag into my clothing, pulled my collar tight, and hurried out of the subway in the direction of home.

The dilapidated high-rises were hidden in darkness, their vague outlines just visible in the starlight. Back when there was electricity, their interiors used to blaze with light. Every window was a tiny cell, and the elevators, like blood vessels, carried people up and down in a ceaseless flow. Many people had worked their entire lives for a single cramped room in one of these buildings. But now, in the wake of the Trip, these glittering giants were dying. Rooms that had once cost an arm and a leg now reeked of feces and dead bodies.

Suddenly, I heard the patter of footsteps behind me.

“Who’s there?” I asked, turning. Thinking it was Fortune checking up on me, I added, “I won’t say a word to the others about—” In the faint starlight, a face appeared on the other side of the street. I squinted at it. “Eh, Innocence?”

The face was delicate and beautiful. Bathed in starlight, its features seemed to melt together. This was Wang Innocence—sometimes you could not even discern her appearance, but the sight of her left you with the impression of purity. You would remember her, and be able to recognize her from across the street.

We walked slowly through the streets together. We often used to stroll together like this, searching for something to eat. Afterward, we would idle away the remainder of the day. Walking became our most frequent pastime. She’d tell me things about her career as an actress, and I’d complain about my workplace and Zhao Fortune. Occasionally, she and I made love. But after Fortune joined us, she showed a clear preference for him. Later, when Handsome arrived, she became close with him for a time. In short, of the five of us, I was the loneliest.

But now, we walked back at an unhurried pace, as though time had been rewound. With her head lowered, she told me that she was nervous about going south. She was a northern girl, and had never

seen the southern sun. Unable to sleep, she had gone for a walk and seen me.

“It’s late,” I said. “Let’s go to my place.”

2

I know you must be anxious to hear what happened after Innocence and I went home. To tell the truth, I was even more anxious than you. I hadn’t had sex in ages, and I felt as though a rat were squeaking and scurrying in my gut. But as a responsible narrator, before I get to that part, I think I need to tell you about my history with Innocence.

Wang Innocence studied acting. After graduation, she auditioned everywhere for film and television roles.

Let me tell you, every last person in the movie business was a rotten scoundrel. They gathered together and eyed Innocence like a pack of wolves. Back then she didn’t understand the meaning in their stares, and she was cut from audition after audition. For three years, she bounced back and forth between the major studios and fly-by-night production companies. The girls who had graduated alongside her had all either made successful debuts, or had changed professions. Only she kept at it. Finally, she won a bit part in a low-budget film.

Unexpectedly, the film turned out to be pretty good, and earned several awards before its release. Sensing an opportunity to net big rewards at little cost, the producers shelled out to hire a marketing firm. Posters with Innocence’s face on them plastered bus stops in every major city. The firm also arranged a promotional tour. The first stop was a coastal city in the south. As it was her first trip to the south, Innocence was so excited that she arrived at the airport hours before her flight, and had to wait for her fellow cast and crew members.

Suddenly, all the lights in the terminal went out with a loud bang. Before she could react, a plane that had been just about to land slammed straight into the tarmac, sending flames high into the air. Her face remained blank.

As if someone had flipped a switch, all around the world the power went out.

At first, everyone waited, in a daze, for the lights to turn back on, for their cars to start up again, for their cell phones to ring. But the waiting dragged on without end. Then people began to realize that the blackout might last forever.

My coworker Guo Melancholy—melancholy no longer—said cheerfully, “It’s just as well. Our civilization was advancing too quickly. This

power outage is a rare opportunity. We can stop and reflect on where we want to go.”

I think, in the end, he might have thought differently. Two days later, as he sat sunning himself on a curb, a child smashed his head in with a rock. His prognosis for the world was nowhere near as accurate as Fortune’s. He had no idea that once the power went out, civilization would not stop to rest, but rapidly regress.

First, people went mad. Their stocks, savings, and networks had been thoroughly purged. While vagrants could still lounge in the sun beneath overpasses, the city’s white-collar workers had lost their entire world. Then people died. Citizens formed small gangs to rob houses, snatching up everything they could eat, drink, or use as a weapon. During the worst of the madness, whenever someone showed his face on the street, a mob would immediately swarm him from all sides, stone him to death with bricks, and loot the body. Then, they would hide by the side of the road and wait for the next unlucky wretch to pass.

To protect myself, I joined forces with seven or eight other men with view to waylaying strangers in a copycat fashion. We were an utterly vicious bunch: each one of us claimed to have taken several lives with our own hands. Chen Bashful said he had killed three people, Yang Affable said he’d killed at least seven, so I hurriedly said I’d killed twenty-one.

We stationed ourselves at an entrance to the subway, with the intention of dragging every solitary person who passed by into the station and beating them to death. But the first to approach was a fierce, hulking man with blood still on his clothes. We surged forward, saw the man’s bulging muscles, and scrambled back again. The man laughed contemptuously and strode away.

“Shit, that won’t do!” I told Bashful. “We can’t chicken out again. We have strength in numbers. We have to be merciless!”

Bashful nodded hastily and said, “Right, just now we weren’t ready. Whoever comes next, see if I don’t bash him to bits!”

After we steeled our nerves, we positioned ourselves in a tight arc at the mouth of the station. Even if that huge man came back, I felt confident that we could encircle and overwhelm him.

Soon, we heard the sound of footsteps again. We grew feverish with excitement. When the footsteps reached the station entrance, we rushed out all at once. Then, we stopped short.

It was Wang Innocence.

I remember it was early evening. The slanting rays of the setting sun tinged the decaying city with red. Our shadows stretched long across the ground. Innocence stood surrounded, panic on her face.

We, however, were even more panicked. I had not seen such a pure face in a long time. Even the hard metallic light of sunset could not lend sharpness to her features. She cringed away from us, her hair in her eyes, shoulders hunched like a hamster. And her hair!—after so long without power, most people had tangled hair and dirty faces, but her hair was jet-black and lustrous, like a swath of ink-dyed silk. Looking at the birds' nests that crowned our own heads, we couldn't help but feel ashamed.

The first to turn traitor was Bashful. His gaze swept right past Innocence, and he called out to Affable behind her: "Goodness, Affable. What a coincidence to see you here!"

Affable tossed the brick in his hand to the side. "Bashful, we're fated to meet. I see you wherever I go. Let's go eat barbecue."

The others, returning to their senses, hailed each other over Innocence's head. In groups of twos and threes, they set off companionably in every direction. I later found out that these self-proclaimed vicious brutes had previously worked in programming. Little wonder that a group of coders lost their will to fight as soon as they laid eyes on Innocence!

As they rushed in from all directions, froze, and then scattered, Innocence looked on as though she were invisible. Finally, only she and I were left standing in the half-light of the street. Still recovering from my panic, I glanced left and right in the evening breeze, half of a brick in my hand. She walked over to me and said, "I'm hungry. Do you have anything to eat?"

I dropped the brick and clapped my hands. "It's late," I said. "Let's go to my place."

Just like that, Innocence and I took up together. We shared what little food we had, dodged crazed strangers, and watched the city rust bit by bit.

As time wore on, the deaths mounted, and everyone grew tired of fighting. With several large gangs threatening retaliation against each other, there was no more indiscriminate violence. But because everyone wanted to restore order, order was never restored. People began to take to the streets, ambling about, idle and listless.

In telling you how I met Innocence, I have no esoteric objective. I just wanted to explain that she's good-looking, lest you think I'm tricking you. Think about it. Why would I trick you? I'm going south. Someone who intends to go south wouldn't lie. Now that you know Innocence is beautiful, I'll continue where I left off. This will make my story more romantic. You see, my objective has always been that simple.

Early the next morning, after we got out of bed, Innocence and I ate the breakfast Fortune had given me. After we'd eaten, we discussed going south. Innocence asked me what it was like.

"Even if you've never been to the south, you never saw it on TV?" I asked her.

She hesitated for a moment. "Yes, but the power's been out for so many years that I've forgotten. Do you still remember it?"

Her question stunned me. I had no memory of the south either.

"Southerners eat from bowls, not plates," I said, wracking my brain. "It's warm there, and in the winter flowers blossom by the roadside."

Delighted, Innocence paced back and forth. "That's wonderful," she said. "I can't wait to go."

"But we have to wait for Fortune to get everything ready. After all, without his food, we'll have a difficult time on the long journey south."

We waited around until evening. As the sun sank toward the horizon, filling the sky with a mournful glow, I caught the golden gleam of a lake in the distance.

"Shall we play ducks and drakes?" I asked.

Innocence and I went to a nearby store, pushed open the door, and carried stacks of cell phones, still in their boxes, from the storeroom down to the shore. We sat down, stripped off the packaging, and took out Apple's thinnest iPhones to date. With a flick of the wrist, the iPhones went skipping across the surface of the lake.

She and I discovered this way of passing the time by accident. While we were searching for food, we discovered a mobile phone retail store in our neighborhood. Though it was abandoned, the storeroom was still neatly stacked with phones. These costly electronics weren't worth a cent in an age without electricity, but we developed a new use for them—ducks and drakes. Truly, cell phones make for extremely smooth skipping. No matter how you throw them, they're guaranteed to skip ten, fifteen times. If you don't believe me, you can take a phone down to the lake and try it for yourself.

We skipped phones and made conversation in a desultory kind of way. The setting sun was fading fast, and dusk was closing in around us.

"Mediocre," Innocence said suddenly, "let's go south."

"Well, yes, we will," I replied with a nod.

"I mean, just the two of us."

Stunned, I lifted my head and looked at Innocence's face in the twilight. The last rays of sunset cut across her face from her brow to the corner of her lips, then died. Her face, even shrouded in gloom, was still beautiful beyond comparison. Snapping out of my daze, I asked, "What did you say?"

She did not answer, just looked at me.

“But, didn’t we agree to go south with Fortune and the others?”

“Fortune won’t take us,” said Innocence, “and I don’t like that Chen Beauty.”

I did not like Beauty either.

“And Handsome runs his mouth all day long. I’d rather be with you, Mediocre.”

This was the first time I had heard Innocence say such a thing to me, and the tenderness in her voice suffused the night air. Warmth rose in my stomach. “Okay,” I said. “We’ll go south, just the two of us. That’s my home. We can put down roots there.”

“Tell me where Fortune hid his food. I’ll get what we need for the road. Then, while it’s still dark, we’ll leave the city and head south,” she said.

I said I would go ask Fortune for food, but Innocence prevented me. She said her chance of success was much greater, and that I should wait here for her. Therefore, I told her the address. I stayed by the shore and watched her figure dissolve into the night, fading away until it vanished altogether. I threw a cell phone at the dark surface of the lake. I heard the *plip plip plip* as it skipped across the water, but I could not see the slightest ripple.

I waited until daybreak, but Innocence did not return.

3

The next day, Fortune packed his things and prepared to leave. Just then, it began to rain heavily. As he watched water sluice down the sides of the buildings, he said worriedly, “I’m afraid this rain may keep up for some time. We can’t go anywhere in this weather.”

“It’s nothing serious,” said Handsome, his voice anxious. “Brother Fortune, you’ve stockpiled so many things. Surely you kept some rain gear. Get it out and we’ll brave the rain.”

“Do you think I’m Doraemon?” said Fortune. “Saving everything I get my paws on?”

“It’s raining too hard,” Beauty chimed in. “If we should catch cold, we have no medicine. We won’t make it. Handsome, you’ll just have to wait a few days.”

Handsome looked at me, and so did Fortune and Beauty. I glanced around and asked, “Have any of you seen Innocence?”

They shook their heads.

“Then let’s wait a few days for her,” I said.

Thus, we decided to delay our departure until the rain stopped. I went back to my place. These days, the concept of “home” no longer existed—my place of residence was a hidden cellar. Beauty had chosen the lobby of a forty-story office building, and Fortune frequently changed locations, sometimes residing beneath bridges, sometimes in cars. All five of us knew where each other lived. Most of the city’s towering housing complexes had been abandoned, notwithstanding occasional holdouts—homeowners who had paid through the nose for their apartments and could not bear to leave. Despite the lack of water and power and the unbearable stench, they were prepared to defend their apartments to the last.

I lay in bed, not wanting to do anything, and waited for Innocence to return. Her warmth still lingered in my blanket. I curled inside it, as though surrounded on all sides by her body.

Suddenly, there was a knock at my door.

Handsome sidled into the room and sat down on the edge of my bed. I gave him a sidelong glance, but did not get up. After a moment, I heard him say, “Mediocre, are you waiting for Innocence? I’m telling you, she isn’t coming back. Do you think she’s really so pure? That’s only window dressing. With the world in the shape it’s in, no one is pure anymore. Many times I saw her go alone to look for Fortune. Maybe he and Innocence are planning to slip away together and leave us behind.”

I sat up, remembering the sight of her receding figure, like a pale glow in thick fog. Indeed, I had promised her we would go south together. But compared to Fortune’s actual power, my words meant nothing.

“And you?” I asked, eyeing Handsome. “Why have you come to find me?”

“Let’s go together! Mediocre, I’m telling you, we can’t count on Fortune. He is ruthless, an unscrupulous businessman, unreliable. Haven’t you been helping him move food these past few days? Come on, we’ll help ourselves to some of it, and then hop on a couple of bicycles and sneak out of the city at night. With me leading the way, it won’t take long to get to the south.”

Seeing the eager expression in Handsome’s eyes, I sighed inwardly. I knew the reason he was in such a hurry to go back south.

Handsome was my university classmate. He had once been pursued by many girls, but the attention only inflated his ego. It was not until the eve of graduation that he met Wu Lovely, a pretty young woman who had just matriculated. Wu Lovely’s loveliness captured Handsome’s heart right away. He gave up his job, returned to school for graduate studies, and waited three years to be with her. He also gifted her with

a pair of precious jade bracelets. They bought a house together in a coastal city in the south. They were preparing to get married when Handsome was sent north on business.

When the world tripped its switch, Handsome and Lovely were in the middle of a long phone call. The geomagnetic storm, like a fierce gale, knocked out the signals connecting the north and the south. At first, Handsome waited patiently for the power to come back on. After all hope of this occurring had been lost, he prepared to go south. But something always got in the way of his plans. During the initial chaos, he'd had to evade roving gangs, which left him badly shaken. After everyone lapsed into idleness, he was kept occupied with the work of gathering food every day.

In the blackout era, good looks were no longer an advantage. Everyone looked dirty and disheveled anyway. When eye candy gathered dust, no one came to lick it clean. The frail scholar nearly starved to death several times. Handsome was skin and bones when he ran into us. In the end, he managed to scrape by with help from Fortune. But when he begged Fortune for the food supplies that would let him return south to look for Lovely, his appeal was rejected. This was one of the reasons he and Fortune never got along.

Surely, his current impatience to return south stemmed from his desire to be reunited with Wu Lovely.

"Ah, Handsome, Handsome, you're so good-looking. Why can't you forget one pretty girl?" I said, and sighed.

Handsome said, "You've never seen Lovely. If you had, you'd be just as crazy about her as I am. She is too adorable. She gives everyone she meets the shyest smile."

His words made me curious. Before I left school, I never saw Lovely, only heard about her from Handsome. Occasionally he would dig out a faded photograph of a sweet, pure face, but the photograph was blurry, and I never got a good look at it. All his talk of Lovely's loveliness made me momentarily forget about Innocence.

"Still," I added hesitantly, "why are you so impatient? Once the rain stops, Fortune will take his food and go south with us. You'll see your Lovely soon enough. Actually, has it occurred to you—"

I paused, leaving the rest of my question unspoken.

When Handsome grasped my meaning, the color drained from his face. "No, no way. Lovely is so cute that no one would hurt her."

After a moment of silence, he resumed his attempt to persuade me. "Fortune won't take me with him. Things have always been rocky between us. Mediocre, listen to me, even if you want to stick with

Fortune, at least help me steal a little food, okay? As long as I have food, I can go alone. I can walk all the way to the south by myself.”

“If we get caught stealing Fortune’s food, the consequences will be severe. He has killed before.”

“Has he hidden a lot away?”

I recalled the sight of the storeroom in the subway, overflowing with food, and nodded. “A lot. Enough to fill several rooms.”

“Then if we take ten pounds or so, what do you think is the likelihood that we’ll be found out?”

“Fine. Find a time when Fortune is gone. We’ll steal a little of his food, for your travels.”

Suddenly, Handsome wavered. “This, ah, this—you see, there’s no way an academic like me can pull off a theft. It’s a violation of the law and society’s cardinal virtues, a pollution of ethics and morality. How about you do it, and I’ll keep watch?”

Handsome’s lack of courage did not surprise me at all. But once I thought it over, I realized someone so faint of heart would only get in the way, so I nodded in agreement. After that, we had only to wait for Fortune to exit the abandoned subway station. Then, we could act.

The next day, the rain was still falling. Handsome and I were hungry, so as per usual we went to beg food from Fortune. We braved the elements and walked to his current lodgings. When we reached the opposite side of the street, Handsome said, “You go ahead. If Fortune sees us together, he’ll be suspicious. I’ll wait here for you.”

Tucking my neck into my collar, I dashed across the rainy street and knocked on Fortune’s door. From inside, I heard movement, and then Fortune’s voice: “Come in!” I pushed open the door and saw that he was lying on top of a woman, both of them echoing moan for moan. A few moments later, they finished, and the woman glanced at me and asked, “Get it while it’s hot?”

I hastily waved my hand. “Thank you for the kind offer, but my stomach has been troubling me lately.”

The woman dressed, accepted a bag of bread offered by Fortune, and left at a leisurely pace. Fortune, half-collapsed on the bed, watched her retreating back and sighed. “Wild as hell. Mediocre, take a look. That one’s a prize. Before the Trip, I could only land a woman like that with a designer bag. After the Trip, all it takes is a bag of bread. Right, why’ve you come to see me?”

“I want some bread.”

“Perfect timing.” Fortune patted the edge of the bed. “Hop up. You’ve saved me the trouble of putting on clothes again.”

I closed both eyes. "I'd rather starve to death."

He laughed. "I was only pulling your leg!" He opened a drawer, took out a loaf of bread, and tossed it to me. "Make sure you rest up over the next few days," he urged. "When the rain stops, we'll go south together."

I took the bread and walked outside into the curtain of rain. When I crossed to the other side of the street, I saw that Handsome had a strange look on his face. His head was bowed, and his hand was tightly clenched. I couldn't tell what he was thinking.

"What's wrong?" I asked.

"I found Lovely's bracelet," he said, opening his palm to reveal a simple jade bracelet.

I gave him a blank look. "How is that possible?" I asked. "Isn't Lovely in the south?"

"Yes, but this definitely belongs to her. It was originally one of a pair. This one goes on the right hand. The marbling on the surface, the scratches where it's been dropped—it's all exactly the same. Mediocre, I'm not going south anymore. Lovely has come north, and I have to find her." As Handsome spoke, his face twitched madly.

I knew what a blow this was to him. He had assumed that Lovely was still in the south. But perhaps she had come north and had been in this city all along. Suddenly, in every street, every alley, every courtyard, every corner, it was possible that he had missed her.

This wasn't just alarmist talk. In the past, two people separated by vast distances could ride out on horseback in search of each other; later on, they could contact each other anywhere in the world with just a string of numbers; but now, the distance needed to keep people apart had shrunk from the entire world to a narrow field of vision. Because we lacked permanent residences and wandered aimlessly every day, even if you were just one street apart, you might miss someone forever. Without electricity, the sense of security in relationships provided by the Information Age crumbled instantly.

But, just maybe . . .

Handsome took two steps backward, the muscles in his face convulsing. "She must have come to find me," he muttered. "She walked all the way from the south to the north to find me! She's here in the city. I have to find her!"

He staggered back in the direction we had come. In no time at all, he was drenched. He shouted as he ran: "Lovely, Lovely, I'm Handsome!" His voice sounded hoarse and muffled in the rain.

We searched in the rain for days. Handsome ducked beneath every eave and shouted, "Lovely, Lovely, I'm Handsome!" Before long, his

voice grew cracked and ragged. When it rained, people sat on the side of the road, their listlessness unabated. As Handsome moved through their midst, shouting at the top of his voice, they slowly turned their heads to watch him, with bored expressions on their faces.

Things went on like this for days, but we found no trace of Lovely. One day, we ran into Fortune on the street. "What's the matter with him?" he asked.

"He's searching for his girlfriend Wu Lovely," I said.

"I thought his girlfriend was in the south?"

"Now she's here in the north, so Handsome needs to find her."

"Oh." Fortune nodded. "No matter, let him search. Let's talk about the plan to go south. This rain will let up soon."

"Let's talk when the rain stops," I said, unable to put the thought of Handsome out of my mind. "By the way, do you know where Innocence has gone?"

Fortune shook his head.

I caught a flash of something evasive in his eyes: he was definitely keeping something from me. However, given his proclivity for secrecy, I knew I would never drag it out of him, so I turned and left, following the sound of Handsome's shouting.

One evening the rain stopped. After days of heavy downpour, the sun could hold back no longer. As soon as the rain let up, it burst forth. A rainbow spanned from one end of the city to the other. Everyone came out into the streets and gazed up at it. Their faces, tinted rose-red, looked a little disoriented.

I couldn't recall seeing such a spectacle for many years, and I could not help but be spellbound by it. Just then, Handsome suddenly grabbed me and pointed to a group of people in the street: "Look, it's Lovely!"

I looked where he pointed. Sure enough, on the other side of the street stood a large group of people looking up at the rainbow, a woman among them. Her back felt familiar to me.

She stood between several big, burly men. Her figure was slim and shapely, perky in the front and the back, and she wore very little clothing. To her left was the heavily-tattooed Liu Fierce; to her right, the muscle-bound Zhou Strong. Qian Vulgar stood behind her. Each of the three men had a hand on her. Their hands roved over her as they gazed dreamily at the sunset and the rainbow.

I finally realized that she was the same woman I had seen in Fortune's room when I had gone to find him. But she was not at all lovely. The moans she had made in bed were extraordinarily shameless, like a symphony.

On her right hand was the bracelet Handsome had given her. Her face looked the same as it did in his faded photograph, except that any sweetness it had once possessed had been replaced by pure licentiousness.

“You found her,” I said. “Go on up to her. Get over there and tell her, ‘Lovely, Lovely, I’m Handsome.’”

But he just stared into the distance, his fingers trembling, not daring to approach her.

After that, Handsome went mad.

4

“Do you think Fortune is up to something?” Beauty asked me.

As she spoke, she moved her face close to mine, so that the fleshy folds that threatened to swallow up her features were visible in perfect detail. The sight was striking. I could see one ripple of fat that spilled from her brow to the corner of her lips. I took a step backward. “What?”

“Fortune,” she repeated, her tone mysterious. “Just think, why would Fortune want to go south?”

“Didn’t Handsome already say? When temperatures drop to thirty below zero this winter, none of us will be able to endure it.”

Beauty snorted. “Do you really buy that? That fool Handsome just wants to go back south to look for his little girlfriend. I don’t believe a word he said!”

I was stunned. “So you never planned to come south with us?”

Beauty gave a smug nod. “Fortune has stashed loads of food in the subway. As soon as he leaves, I’ll root it out. I’ll never want for food again.”

So this was Beauty’s plan all along. I sighed inwardly. Ever since I’d helped Fortune move his food, Innocence, Handsome, and Beauty had come looking for me, one after another. They all sought the trove of food in the subway. It was like a flame glowing black in the darkness, attracting helpless, fluttering moths.

“You want me to tell you where Fortune hid his food, right?” I shook my head. “I can’t do that. Innocence and Handsome came to me too, but now she’s missing and he’s crazy. What will happen to you?”

“I’m not like them.”

Indeed, Beauty was not like Innocence and Handsome. In fact, she wasn’t like any of us. I tried to remember the day I first met Beauty, but a thick fog clouded my memory. I could not recall when she had joined our little group. It was as if one day, we had turned a corner, Beauty had strolled up, and our four person group became five.

One time, I asked Fortune, “When on earth did Beauty join us?”

Fortune narrowed his eyes, a rare look of confusion on his face. “I don’t remember either.” After a pause, he added, “However, she’s certainly no ordinary woman.”

Yes, no one who had survived this long was ordinary. Innocence relied on her face, Fortune on his ingenuity, and I on Fortune. Handsome had narrowly escaped starvation several times. But as for Beauty, a decidedly unbeautiful woman, how did she survive in these predatory end times? While everyone else grew sallow and emaciated due to malnutrition, only she grew fatter by the day. When she walked, her rolls jiggled—a truly loathsome sight, and yet the fact that she had not been beaten to death was a testament to her might.

“Hell’s bells, why are you just standing there?” said Beauty, giving me a shove. “Take me to where Fortune hid his food. You’ll be gone tomorrow, so leave the food to me.”

“Why don’t you go ask Fortune?”

Beauty snorted. “He certainly won’t tell me.”

“What makes you so sure I’ll tell you?” I asked, my patience wearing thin. “Just because your name is Beauty?”

Beauty ignored the contempt in my voice. She pressed closer to me. “I know you look down on me. You like Innocence, you know Handsome, you rely on Fortune, and you’ve always hated me. But I have information I can trade you for the location of Fortune’s food.”

I leaned away from her and laughed. “Tomorrow I’m going south with Fortune, and I’ll depend on him for everything. I can’t think of any information that is worth betraying my boss, the hand that feeds me.”

“I know where Innocence is,” said Beauty.

Under cover of darkness, Beauty and I went to the subway station and made our way down the escalator step-by-step.

Without matches, we were completely immersed in the gloom, like ants toiling along the bottom of an ink bottle. Relying only on the feel of the rough tunnel wall and my memory, I inched toward Fortune’s hidden storeroom. Beauty followed closely behind me.

My mind flashed back to the first time Fortune led me here: the light from the match pinched between his fingers had illuminated one half of his face, the other half hidden in the darkness. He trusted me so much that he’d even told me the location of his food, and yet here I was, leading the unbeautiful Chen Beauty to rob him of it. But tomorrow I would go south with him, and he’d be none the wiser that the food he’d hidden in the north had been lost. Perhaps we would stay in the south and never come back. At least, that was how I consoled myself.

As we moved deeper into the subway tunnel, the rough surface of the wall suddenly became smooth. I stopped and tested the wall with my knuckles. A hollow clang answered.

“Right here,” I said. “Fortune’s food is hidden inside this room.”

In the darkness, I couldn’t make out Beauty’s expression, but I could hear the pleased surprise in her voice. “Right here? He sure hid it deep enough,” she said. “How do we get the door open?”

I held the door shut. “Before I open it, tell me where Innocence has gone.”

Beauty made to pull on the door, but I grabbed her hand. After a long while, she broke the silence. “Innocence left with Fortune. You should ask him about her whereabouts.”

“Fortune?” I was stunned. “What business did she have with him?”

“That night, I saw her go into Fortune’s room. I waited a long time, but I never saw her come out. After that, she was gone. Fortune must know where she went.”

I thought back to the evening Innocence left me waiting by the lake. Her receding figure had vanished with the setting sun. I didn’t realize she had gone to find Fortune, and would not return. Lost in my thoughts, my grip went slack. Beauty withdrew her hand from mine and grabbed the door handle.

But evidently Fortune had locked the door securely. She gave the handle several sharp tugs, but the door did not budge.

“Hey, lend me a hand,” she said.

Still thinking of Innocence, I ignored her. She caught my arm and guided it to the handle. I tried it and felt the door give a little, but it would not open no matter how hard I pulled.

“Need some help?” said a voice behind me.

“That would be terrific.” As soon as the words left my mouth, I sensed that something was wrong. I turned around, but could see only darkness behind me.

Chk.

A bright flicker grew into a flame, and light pierced the darkness. Fortune’s face appeared, deeply lined, his eyes like a hawk. As he held a match between his fingers, the flame crept along the thin stem. The flickering light made his expression seem especially somber. After several seconds, the match burned down to his fingertips, but he didn’t seem to feel the slightest pain. The flame died, and his face sank back into the gloom.

He simply stood there, just as he had before our arrival. He had heard every word Beauty and I had said, but stayed silent. My face burned, but luckily no one could see it.

The light blazed up again. Fortune stared at us. “Well, it’s rare to see you two together. Mediocre, haven’t you always hated Beauty’s presence in our midst? And Beauty, haven’t you always said that my food is wasted on Mediocre?”

Beauty and I looked at each other, and then we both took a step back. The match burned out. Fortune tossed it away and lit another.

“Fortune, where has Innocence gone?” I asked.

Fortune glanced at me, but did not answer. Instead, he addressed Beauty: “You’re trying to steal this food? Beauty, I know you’re no ordinary woman. You’ve survived the fighting and confusion thus far. But have you considered that, without me, you won’t be able guard this food on your own?”

Beauty raised her face to the light and stared straight at Fortune. “Sometimes you think too highly of yourself, too.”

“So you have another way?”

“I always have a way.”

Fortune nodded. “Yes, you’re sharper than us all. You’ll go to any lengths to survive. Never mind a power outage—even if an asteroid hit the Earth, even if zombies choked the streets, you’d survive.” As he spoke, he turned and looked all around him. “In that case, there are others on the way?”

In the deep, silent subway tunnel, the match gave off only a narrow ring of light. Beyond it, the darkness circled restlessly. Footsteps, numerous and confused, sounded nearby, signaling the approach of more than one person.

I gave Beauty an astonished look, but her face remained impassive, as though everything was falling into place exactly as she had planned. Four people came toward us out of the darkness, and the flame gradually threw their faces into relief. I recognized all four of them: Liu Fierce, Zhou Strong, Qian Vulgar, and their licentious female companion. They had steel rods in their hands and malicious smiles on their faces.

“It looks like you’ve been planning this for a long time,” said Fortune, striking another match. “If this crew is at your beck and call, this wasn’t a decision of one or two days.”

“I reached out to them a month ago,” said Beauty.

“We hadn’t decided to go south yet.”

“But even back then, you’d already started to give me less food than before.”

Fortune nodded. “I guess there’s truth to the story of the farmer and the viper. You’re sharp. You’re better suited to survive in this world than all of us.”

As Beauty and Fortune spoke, Fierce, Strong, and Vulgar gathered around us. The light threw long shadows behind them that stretched into the darkness. The lone woman leaned against the wall and grinned at us.

“Fortune, don’t be stubborn. Go south with Mediocre tomorrow, and leave this food to us,” said Beauty. “And don’t resist. You’re old. You can’t win against those three. They’ve all killed before.”

Fortune snorted. “I can believe that Liu Fierce and Zhou Strong have killed before. Heh, but the only life Qian Vulgar has taken with his hands, is from masturbating too much.”

Vulgar flew into a rage. “Fuck, you asked for it!”

They started forward, but just then, the match went out. Darkness enveloped everything.

“He’s trying to get away!” shouted Fierce. “After him!”

But they stopped dead in their tracks. A flame had flared up in Fortune’s hand again, and in his other hand was a gun.

The barrel of the gun was pure black, even darker than the surrounding gloom, like a mass of ink in his hand. The muzzle of the gun was pointed at Fierce, whose bulging facial muscles twitched as he backed away slowly.

Fortune smiled coldly. “Now you know how I guard all this food.”

Vulgar also backed away. “D-does the p-pistol still work?” he stammered, his eyes darting from side to side. “D-didn’t the geomagnetic storm take out all electronics?”

“Idiot!” said Strong, who had been silent until now. “It’s not a missile launcher. Pistols don’t require electricity, they use gunpowder!” He turned to look at Fortune. “Hey, Boss Zhao, we really fumbled the ball this time. We’ll take our leave.”

Fortune kept the gun raised. His face gave no indication of his feelings on the matter. The flame died again, but he did not light another match. The darkness and the silence were suffocating.

“Beat it,” he said.

The four uninvited guests withdrew slowly, with shuffling steps. I stood frozen, my mind racing: in an age without electricity, the gun in Fortune’s hand meant that his advantage was absolute. And I had led Beauty here, who had led the four others here, with every intention of plundering his trove of food. It was not in Fortune’s character to forgive this kind of betrayal. What was his next move? Would he dispose of Beauty and then come for me? It was a pity I wouldn’t see Innocence before I died—right, where had she gone—

As my mind reeled with a thousand different thoughts, Beauty had already begun to beg for mercy: “Fortune, I was wrong. I only came to help you check on the food. I’m going south with you. I wouldn’t trick

you. Why would I trick you if I want to go south? It was all Mediocre. He brought me here. He wanted to be with me, to steal me away from you . . . ”

Fortune remained silent. The light did not reappear, and I did not know what he was thinking in the shadows. In a standoff, time passes at a leaden pace. Beads of sweat broke out on my forehead, and my legs quaked as I debated making a run for it in the darkness.

Just then, a hoarse, desperate scream came from the other end of the tunnel:

“Lovely, Lovely, I’m Handsome. Don’t you recognize me?”

Fortune struck another match. In its flickering glow, I saw Handsome staggering toward us. He screamed as he ran, teeth bared and fingers curled into claws. He stumbled and fell, but then scrambled back up and continued his mad rush for the woman beside Fierce.

He looked terrible. His face was savage and grotesque, and blood dripped down his forehead.

Fierce’s face darkened, and he whirled around to face Beauty. “Fuck! I knew this was too good to be true. You were laying an ambush for us all along!” Strong and Vulgar scowled at her.

Fortune was stunned, and he let the match in his hand burn out again. In the very instant we were plunged into darkness, Beauty lunged at Fortune and grabbed hold of his hand. Fortune struggled, and they fell to the floor and began to roll about.

“Ah! Who are you?” Nearby, a female voice cried out in alarm. “Let go of me!”

The reply came from Handsome: “Lovely, ah, Lovely, don’t you recognize me? I’m Hand—ow, who hit me!”

Fierce grabbed Handsome’s head and began slamming it against the ground. “Even if you were strong, it would still be a mistake to jump me. Look at you, you’re chicken shit! Well, what are you two standing around for? Go deal with Zhao Fortune!”

Strong and Vulgar finally reacted: following the sounds of struggle, they ran toward Beauty and Fortune, who were entangled on the ground. They sprinted by on either side of me, moving so quickly that I felt wind whistle past my face in their wake.

Total chaos broke out. The dark tunnel echoed with muffled groans and piteous cries, painful howls and angry curses. But strangely, everyone seemed to have forgotten about me. It was more than a little humiliating. Just as annoyance washed over me, I felt something hit my foot. I bent down and felt around until my fingers found a small, lightweight box. When I shook it, I heard something rattle inside.

It was a box of matches.

Wild with joy, I lay down on the ground and opened the box. There were only a few matches inside, maybe three or four. As I struck one, the surrounding darkness was driven back several yards by the light.

I saw Beauty had Fortune pinned to the ground, both scrabbling for the gun. Strong and Vulgar had run right past them to the other end of the tunnel. The light brought them up short, and they hastily doubled back. Fierce had Handsome by the collar and was kicking him, but Handsome held tight to the licentious woman's thigh, still screaming.

The flame died, and I scrambled to strike another match.

Fortune, Beauty, Strong, and Vulgar were a tangle of limbs and savage faces. Seven hands were locked on the gun in deathlike grips. The only free hand, which belonged to Vulgar, was feeling up Beauty, who let fly a stream of abuse. Handsome's legs were wrapped around Fierce's waist, and he had sunk his teeth into the other man's ear, blood dribbling from his mouth. Fierce screamed but did not fall, only stumbled backward. The licentious woman pounded her fists against Handsome's back.

My hand shook, and the light went out again. I reached for another match, but my hands trembled so badly that I dropped the box on the floor. I groped around for a while on my hands and knees. But when I finally found the matchbox again, it was empty. I swore quietly and felt around again until I came upon a matchstick. Several seconds later, light reappeared.

Fortune, Beauty, Strong, and Vulgar sat in a circle, hands fumbling in the clothes of the people on either side of them, muttering, "The gun? Where's the gun?"

Beauty had gotten the worst of it. Her clothes were in total disarray. But she grit her teeth and applied herself to fishing the gun from the clothing of the two men next to her. Handsome had embraced the licentious woman, and the two of them were embroiled in a passionate kiss. Fierce was still bleeding from his ear, bewilderment on his face.

The last match guttered out. The muffled groans and the sounds of blows started up again. Handsome's cries were especially pathetic. I could only guess that Fierce was picking on him mercilessly.

"Everybody listen up!" I shouted.

All of the noise ceased at once, and fourteen eyes looked in my direction. The surrounding darkness was so thick, however, that they could not see anything. I cleared my throat and said, "Fighting is so inelegant. Why don't we sit down and talk—"

The screaming and groaning resumed, and every so often I heard the dull thud of a brick hitting something.

Suddenly, Vulgar shouted excitedly, “Found it!” Before the words were out of his mouth, there was a sharp scream, followed by the scrape of metal skittering against concrete. It sounded as though, in the mad scramble for the gun, it was being kicked back and forth across the floor. On the other side of the tunnel, Handsome shrieked like a pig being slaughtered. I couldn’t tell whether his leg had been broken or his lip had been split.

Just then, someone gave the gun a forceful kick. The sound of the gun against the concrete grew sharp, and then it streaked past me. I dove for it, but my hand closed on empty air. The gun slid all the way to Fierce. Several seconds later, Handsome’s screaming ceased abruptly, and a gunshot rang out.

As the flash lit up the entire tunnel, I saw the blood and madness on Handsome’s face.

“Don’t!” I yelled.

“Put down the gun and we’ll talk it over,” said Fortune.

“Handsome, don’t be rash,” said Beauty. “From now on, I’m yours.”

“Shit! What are you doing pulling a gun like that? You’ve ruined the peace. We’re leaving, we’re leaving,” said Fierce, Strong, and Vulgar at the same time.

Handsome, holding the gun with both hands, made no response to any of us. Instead, he looked at the licentious woman, who stood petrified, and said, “Lovely, Lovely, I’m Handsome. Don’t you recognize me?”

The licentious woman, with bewilderment in her voice, asked, “Lovely? Who is Lovely?”

“You aren’t Wu Lovely?” asked Handsome.

“I think you’ve mistaken me for someone else,” said the woman. “My name is Zhen Promiscuous.”

I registered the imminent danger and threw myself to the ground.

Bang—bang—bang—bang—bang—bang—bang—bang—bangbangbang. Handsome’s crazed screams filled the space between the gunshots, shattering the darkness and stillness of the tunnel.

When the gunfire stopped, a full five minutes after it had started, the entire tunnel fell deathly silent.

I felt myself all over. After I’d made sure there were no new holes in my body, I sighed with relief. The tunnel was like a tomb. Though I couldn’t hear any stirring at all, I still unconsciously called out, “Is anyone there?”

There was no answer. I felt a pang of grief. There had been so many gunshots. The others must not have been so lucky—

Before I could finish the thought, Beauty's voice piped up to my left. "Eh? I'm all right!"

To my right, Promiscuous said, "I'm unhurt, too."

Fierce, Strong, and Vulgar's voices came from different directions, but were filled with the same surprise: "Not a single hit!"

From somewhere nearby, Fortune gave a bitter laugh tinged with pain. "Every damn one of them hit me . . ."

Beauty, Fierce, Strong, and Vulgar felt their way to the metal door of the storeroom. They heaved on the handle, and the door opened with a clang. The plastic bags inside poured out like a tide.

"Haha! I finally found you!" crowed Beauty. Even though it was too dark to see anything, I could imagine the fleshy folds of her face rippling with wild joy. Her joy was contagious: the three men fell upon the plastic bags, consumed with laughter. They would suffer from hunger no longer. The food Fortune had hidden away would sustain them for many years. And after that—well, who knew?

Fortune, lying in a pool of his own blood, gave a cold chuckle.

Suddenly, Beauty stopped laughing, followed by the three men. They uttered shrill cries of surprise and began to rummage through the plastic bags, but all I could hear was the crisp sounds of plastic crinkling.

"They're empty?" said Beauty in a puzzled voice. Then she turned on Fortune and shouted, "What have you done with the bread? Why are all of these bags empty?"

Fortune laughed.

"Quit laughing and spit it out. If you don't, I'll beat you to—" Beauty, abruptly realizing that Fortune had been shot a dozen times and the situation was beyond retrieval, changed tack and softened her tone. "Go on, speak up now. You'll be dead soon. Won't you tell us where you hid the bread?"

"Heh, it . . . ran out . . . a while ago."

"That's not possible," said Beauty. "You have a whole room filled with food."

"How could I find that much bread by myself?" said Fortune, his voice weak. "I hid quite a bit, but . . . but I used up my last loaf of bread providing for you lot these last few years." He laughed again. "Did you really think I wanted to go south because I believed Handsome's bullshit? It was because I was already out of food. If we stayed here any longer, you would have caught on . . . I brought Mediocre here to make him think that I still had a lot of food hidden away. That way, when we went south, he'd continue to listen to me . . ."

“Fuck! You led me on!” Beauty aimed a kick at Fortune, but in the darkness, her foot hit a stone instead, and she gasped in pain. She gave up on Fortune and caught Fierce’s arm. “Brother Fierce, look, I knew Zhao Fortune was unreliable. Today, with your help, I finally unmasked him. From now on, I’m with you. I’ll do whatever you want me to.”

Muttering curses, Fierce turned and stalked off with Strong and Vulgar. Promiscuous left with them as well. Beauty hastily followed, keeping up a constant stream of flattery. I had faith that Beauty would quickly fall into step beside them. She would transition seamlessly from our little five-person group to their little five-person group. She was always sharp. She would outlive all of us.

Before their footsteps faded completely, Handsome suddenly came to his senses. As he sprayed bullets in his violent rage, he had slipped into a stupor. But Promiscuous’ departure caused him to recover his intellect. He screamed, “Promiscuous, Promiscuous, I’m Handsome!” and then took off after them.

Thus, only Fortune and I were left in the tunnel. As I crawled toward him, my hand touched a sticky, tepid liquid. Further ahead, I found his face with my hand, and patted his cheek. “Are you dead?”

“Not yet.”

“Oh.”

After a pause, I asked, “Do you know where Innocence has gone?”

Fortune’s wheezing breath sounded especially pronounced in the darkness, in the same way that a candle’s flame dances violently just before it burns out. I was worried that he might stop breathing at any moment, so I asked again.

“She . . . she went south.”

His answer stunned me for a moment. I thought of Innocence’s receding figure in the twilight, and shook my head. “No way. She told me to wait for her, so we could go together.”

“Yes, she wanted to go with you, too. But when she came to ask me for bread, I . . . Heh, you don’t want to know . . . I told her I’d already run out of food, and that she could not go south with you.”

“Why?”

“Because, Mediocre, because you’re my . . . You listen to me, in the north or the south, before the Trip or after, I have always been and will always be your boss. You cannot escape my grasp. The food I have left is only enough for two people. At first, I planned to bring only you. Handsome, Beauty, and Innocence were to be left behind. So Innocence went south first. She knows my methods. Everything I set out to do always . . .” Fortune, suddenly lively, said all of this in one breath. Then,

he sagged again. “If you had gone south with me, perhaps you would have found her.”

I clutched his collar and said urgently, “But Innocence is just a girl. How can she go south without food or weapons? How long ago did she leave? What road did she take? Is she safe?”

But I did not hear Fortune’s voice again. I placed my hand on his face. His flesh had already grown stiff and felt icy to the touch, like the coming winter.

Epilogue

Winter was almost upon us, and the weather was extraordinarily cold. By the end of November, all the leaves had fallen from the trees. The wind soughed through the bare branches, accompanied by stinging, bitter cold. No one wanted to go out walking in this weather. Everyone cocooned themselves in their homes.

I saw Beauty on the streets only once. She was with Liu Fierce and his gang, who whispered among themselves as they walked. I said hello to her, but in her eyes, I might as well have been made of air. Handsome followed them at a distance, completely out of his wits. He had eyes only for Zhen Promiscuous, who had grown even more licentious. I said hello to him too, but he looked right through me.

I holed up at home for a few days. Then, with sudden jolt of determination, I snatched up a suitcase and began to walk south. I imagined what the south looked like, and how my reunion with Innocence would unfold. The farther I walked, the happier I felt, and before long I had left the city behind. Suddenly, in the distance, I spied a body lying beneath a withered tree. The white clothing on the body looked extremely familiar.

Several birds roosted in the tree, shivering in the cold. Unable to determine which way to go in the geomagnetic storm, they had missed their last chance to fly south to warmer climes.

I stood rooted to the spot, trembling, though whether it was because of the cold or some other reason I could not tell. I wanted to step forward and confirm the identity of the body, but I was too afraid. The birds huddled together in the branches.

After a long while, I turned and walked back to the city.

When I returned home, I wrapped myself in three layers of blankets, but I couldn’t stop shivering. I lay in bed for many days. Outside, torrential rain alternated with swirling snow. The cold pierced the walls,

penetrated my blankets, and seeped into my bones. Handsome was right. Temperatures would reach a terrifying thirty degrees below zero this winter. No one could endure it, but not one of us could go south.

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ABOUT THE AUTHOR

A Que was born in 1990 in Hubei province, and now lives in Beijing. His work is regularly published in top magazines like *Science Fiction World*. He has won both Chinese Nebula and Galaxy Awards for his short fiction. His collection *Travel With My Dear Android* was published in 2015.

Soldierin'

JOE R. LANSDALE

They said if you went out West and joined up with the colored soldiers, they'd pay you in real Yankee dollars, thirteen of them a month, feed and clothe you, and it seemed like a right smart idea since I was wanted for a lynchin'. It wasn't that I was invited to hold the rope or sing a little spiritual. I was the guest of honor on this one. They was plannin' to stretch my neck like a goozle-wrung chicken at Sunday dinner.

Thing I'd done was nothin' on purpose, but in a moment of eyeballin' while walkin' along the road on my way to cut some firewood for a nickel and a jar of jam, a white girl who was hangin' out wash bent over and pressed some serious butt up against her gingham, and a white fella, her brother, seen me take a look, and that just crawled all up in his ass and died, and he couldn't stand the stink.

Next thing I know, I'm wanted for being bold with a white girl, like maybe I'd broke into her yard and jammed my arm up her ass, but I hadn't done nothin' but what's natural, which is glance at a nice butt when it was available to me.

Now, in the livin' of my life, I've killed men and animals and made love to three Chinese women on the same night in the same bed and one of them with only one leg, and part of it wood, and I even ate some of a dead fella once when I was crossin' the mountains, though I want to rush in here and make it clear I didn't know him all that well, and we damn sure wasn't kinfolks. Another thing I did was I won me a shootin' contest up Colorady way against some pretty damn famous shooters, all white boys, but them's different stories and not even akin to the one I want to tell, and I'd like to add, just like them other events, this time I'm talking about is as true as the sunset.

Pardon me. Now that I've gotten older, sometimes I find I start out to tell one story and end up tellin' another. But to get back to the one I was

talkin' about . . . So, havin' been invited to a lynchin', I took my daddy's horse and big ole loaded six-gun he kept wrapped up in an oilcloth from under the floorboards of our shack, and took off like someone had set my ass on fire. I rode that poor old horse till he was slap worn out. I had to stop over in a little place just outside of Nacogdoches and steal another one, not on account of I was a thief, but on account of I didn't want to get caught by the posse and hung and maybe have my pecker cut off and stuck in my mouth. Oh. I also took a chicken. He's no longer with me, of course, as I ate him out there on the trail.

Anyway, I left my horse for the fella I took the fresh horse and the chicken from, and I left him a busted pocket watch on top of the railing post, and then I rode out to West Texas. It took a long time for me to get there, and I had to stop and steal food and drink from creeks and make sure the horse got fed with corn I stole. After a few days, I figured I'd lost them that was after me, and I changed my name as I rode along. It had been Wiliford P. Thomas, the *P* not standing for a thing other than *P*. I chose the name Nat Wiliford for myself, and practiced on saying it while I rode along. When I said it, I wanted it to come out of my mouth like it wasn't a lie.

Before I got to where I was goin', I run up against this colored fella taking a dump in the bushes, wiping his ass on leaves. If I had been a desperado, I could have shot him out from over his pile and taken his horse, 'cause he was deeply involved in the event—so much, in fact, that I could see his eyes were crossed from where I rode up on a hill, and that was some distance.

I was glad I was downwind, and hated to interrupt, so I sat on my stolen horse until he was leaf wiping, and then I called out. "Hello, the shitter?"

He looked up and grinned at me, touched his rifle lying on the ground beside him, said, "You ain't plannin' on shootin' me, are you?"

"No. I thought about stealin' your horse, but it's sway back and so ugly in the face it hurts my feelings."

"Yeah, and it's blind in one eye and has a knot on its back comes right through the saddle. When I left the plantation, I took that horse. Wasn't much then, and it's a lot less now."

He stood up and fastened his pants and I seen then that he was a pretty big fellow, all decked out in fresh-looking overalls and a big black hat with a feather in it. He came walkin' up the hill toward me, his wipin' hand stuck out for a shake, but I politely passed, because I thought his fingers looked a little brown.

Anyway, we struck it up pretty good, and by nightfall we found a creek, and he washed his hands in the water with some soap from his

saddlebag, which made me feel a mite better. We sat and had coffee and some of his biscuits. All I could offer was some conversation, and he had plenty to give back. His name was Cullen, but he kept referrin' to himself as The Former House Nigger, as if it were a rank akin to general. He told a long story about how he got the feather for his hat, but it mostly just came down to he snuck up on a hawk sittin' on a low limb and jerked it out of its tail.

"When my master went to war against them Yankees," he said, "I went with him. I fought with him and wore me a butternut coat and pants, and I shot me at least a half dozen of them Yankees."

"Are you leaking brains out of your gourd?" I said. "Them rebels was holdin' us down."

"I was a house nigger, and I grew up with Mr. Gerald, and I didn't mind going to war with him. Me and him was friends. There was lots of us like that."

"Y'all must have got dropped on your head when you was young'ns."

"The Master and the older Master was all right."

"Cept they owned you," I said.

"Maybe I was born to be owned. They always quoted somethin' like that out of the Bible."

"That ought to have been your clue, fella. My daddy always said that book has caused more misery than chains, an ill-tempered woman, and a nervous dog."

"I loved Young Master like a brother, truth be known. He got shot in the war, right 'tween the eyes by a musket ball, killed him deader than a goddamn tree stump. I sopped up his blood in a piece of his shirt I cut off, mailed it back home with a note on what happened. When the war was over, I stayed around the plantation for a while, but everything come apart then, the old man and the old lady died, and I buried them out back of the place a good distance from the privy and uphill, I might add. That just left me and the Old Gentleman's dog.

"The dog was as old as death and couldn't eat so good, so I shot it, and went on out into what Young Master called The Big Wide World. Then, like you, I heard the gov'ment was signing up coloreds for its man's army. I ain't no good on my own. I figured the army was for me."

"I don't like being told nothin' by nobody," I said, "but I surely love to get paid." I didn't mention I also didn't want to get killed by angry crackers and the army seemed like a good place to hide.

About three days later, we rode up on the place we was looking for. Fort McKavett, between the Colorady and the Pecos rivers. It was a sight, that fort. It was big and it didn't look like nothin' I'd ever seen

before. Out front was colored fellas in army blue drilling on horseback, looking sharp in the sunlight, which there was plenty of. It was hot where I come from, sticky even, but you could find a tree to get under. Out here, all you could get under was your hat, or maybe some dark cloud sailing across the face of the sun, and that might last only as long as it takes a bird to fly over.

But there I was. Fort McKavett. Full of dreams and crotch itch from long riding, me and my new friend sat on our horses, lookin' the fort over, watchin' them horse soldiers drill, and it was prideful thing to see. We rode on down in that direction.

In the Commanding Officer's quarters, me and The Former House Nigger stood before a big desk with a white man behind it, name of Colonel Hatch. He had a caterpillar mustache and big sweat circles like wet moons under his arms. His eyes were aimed on a fly sitting on some papers on his desk. Way he was watchin' it, you'd have thought he was beading down on a hostile. He said, "So you boys want to sign up for the colored army. I figured that, you both being colored."

He was a sharp one, this Hatch.

I said, "I've come to sign up and be a horse rider in the Ninth Cavalry."

Hatch studied me for a moment, said, "Well, we got plenty of ridin' niggers. What we need is walkin' niggers for the goddamn infantry, and I can get you set in the right direction to hitch up with them."

I figured anything that was referred to with *goddamn* in front of it wasn't the place for me.

"I reckon ain't a man here can ride better'n me," I said, "and that would be even you, Colonel, and I'm sure you are one ridin' sonofabitch, and I mean that in as fine a way as I can say it."

Hatch raised an eyebrow. "That so?"

"Yes, sir. No brag, just fact. I can ride on a horse's back, under his belly, make him lay down and make him jump, and at the end of the day, I take a likin' to him, I can diddle that horse in the ass and make him enjoy it enough to brew my coffee and bring my slippers, provided I had any. That last part about the diddlin' is just talkin', but the first part is serious."

"I figured as much," Hatch said.

"I ain't diddlin' no horses," The Former House Nigger said. "I can cook and lay out silverware. Mostly, as a Former House Nigger, I drove the buggy."

At that moment, Hatch come down on that fly with his hand, and he got him too. He peeled it off his palm and flicked it on the floor. There

was this colored soldier standing nearby, very stiff and alert, and he bent over, picked the fly up by a bent wing, threw it out the door and came back. Hatch wiped his palm on his pants leg. "Well," he said, "let's see how much of what you got is fact, and how much is wind."

They had a corral nearby, and inside it, seeming to fill it up, was a big black horse that looked like he ate men and shitted out saddlebags made of their skin and bones. He put his eye right on me when I came out to the corral, and when I walked around on the other side, he spun around to keep a gander on me. Oh, he knew what I was about, all right.

Hatch took hold of one corner of his mustache and played with it, turned, and looked at me. "You ride that horse well as you say you can, I'll take both of you into the cavalry, and The Former House Nigger can be our cook."

"I said I could cook," The Former House Nigger said. "Didn't say I was any good."

"Well," Hatch said, "what we got now ain't even cookin'. There's just a couple fellas that boil water and put stuff in it. Mostly turnips."

I climbed up on the railing, and by this time, four colored cavalry men had caught up the horse for me. That old black beast had knocked them left and right, and it took them a full twenty minutes to get a bridle and a saddle on him, and when they come off the field, so to speak, two was limpin' like they had one foot in a ditch. One was holding his head where he had been kicked, and the other looked amazed he was alive. They had tied the mount next to the railin', and he was hoppin' up and down like a little girl with a jump rope, only a mite more vigorous.

"Go ahead and get on," Hatch said.

Having bragged myself into a hole, I had no choice.

I wasn't lyin' when I said I was a horse rider. I was. I could buck them and make them go down on their bellies and roll on their sides, make them strut and do whatever, but this horse was as mean as homemade sin, and I could tell he had it in for me.

Soon as I was on him, he jerked his head and them reins snapped off the railing and I was clutchin' at what was left of it. The sky came down on my head as that horse leaped. Ain't no horse could leap like that, and soon me and him was trying to climb the clouds. I couldn't tell earth from heaven, 'cause we bucked all over that goddamn lot, and ever time that horse come down, it jarred my bones from butt to skull. I come out of the saddle a few times, nearly went off the back of him, but I hung in there, tight as a tick on a dog's nuts. Finally he jumped

himself out and started to roll. He went down on one side, mashing my leg in the dirt, and rolled on over. Had that dirt in the corral not been tamped down and soft, giving with me, there wouldn't been nothing left of me but a sack of blood and broken bones.

Finally the horse humped a couple of sad bucks and gave out, started to trot and snort. I leaned over close to his ear and said, "You call that buckin'?" He seemed to take offense at that, and run me straight to the corral and hit the rails there with his chest. I went sailin' off his back and landed on top of some soldiers, scatterin' them like quail.

Hatch come over and looked down on me, said, "Well, you ain't smarter than the horse, but you can ride well enough. You and The Former House Nigger are in with the rest of the ridin' niggers. Trainin' starts in the morning."

We drilled with the rest of the recruits up and down that lot, and finally outside and around the fort until we was looking pretty smart. The horse they give me was that black devil I had ridden. I named him Satan. He really wasn't as bad as I first thought. He was worse, and you had to be at your best every time you got on him, 'cause deep down in his bones, he was always thinking about killing you, and if you didn't watch it, he'd kind of act casual, like he was watching a cloud or somethin', and quickly turn his head and take a nip out of your leg, if he could bend far enough to get to it.

Anyway, the months passed, and we drilled, and my buddy cooked, and though what he cooked wasn't any good, it was better than nothin'. It was a good life as compared to being hung, and there was some real freedom to it and some respect. I wore my uniform proud, set my horse like I thought I was somethin' special with a stick up its ass.

We mostly did a little patrollin', and wasn't much to it except ridin' around lookin' for wild Indians we never did see, collectin' our thirteen dollars at the end of the month, which was just so much paper 'cause there wasn't no place to spend it. And then, one mornin', things changed, and wasn't none of it for the better, except The Former House Nigger managed to cook a pretty good breakfast with perfect fat biscuits and eggs with the yolks not broke and some bacon that wasn't burned and nobody got sick this time.

On that day, Hatch mostly rode around with us, 'cause at the bottom of it all, I reckon the government figured we was just a bunch of ignorant niggers who might at any moment have a watermelon relapse and take to gettin' drunk and shootin' each other and maybe trying to sing a spiritual while we diddled the horses, though I had sort of been responsible for

spreadin' the last part of that rumor on my first day at the fort. We was all itchin' to show we had somethin' to us that didn't have nothin' to do with no white fella ridin' around in front of us, though I'll say right up front, Hatch was a good soldier who led and didn't follow, and he was polite too. I had seen him leave the circle of the fire to walk off in the dark to fart. You can't say that about just anyone. Manners out on the frontier was rare.

You'll hear from the army how we was all a crack team, but this wasn't so, at least not when they was first sayin' it. Most of the army at any time, bein' they the ridin' kind or the walkin' kind, ain't all that crack. Some of them fellas didn't know a horse's ass end from the front end, and this was pretty certain when you seen how they mounted, swinging into the stirrups, finding themselves looking at the horse's tail instead of his ears. But in time everyone got better, though I'd like to toss in, without too much immodesty, that I was the best rider of the whole damn lot. Since he'd had a good bit of experience, The Former House Nigger was the second. Hell, he'd done been in war and all, so in ways, he had more experience than any of us, and he cut a fine figure on a horse, being tall and always alert, like he might have to bring somebody a plate of something or hold a coat.

Only action we'd seen was when one of the men, named Rutherford, got into it with Prickly Pear—I didn't name him, that come from his mother—and they fought over a biscuit. While they was fightin', Colonel Hatch come over and ate it, so it was a wasted bout.

But this time I'm tellin' you about, we rode out lookin' for Indians to scare, and not seein' any, we quit lookin' for what we couldn't find, and come to a little place down by a creek where it was wooded and there was a shade from a whole bunch of trees that in that part of the country was thought of as being big, and in my part of the country would have been considered scrubby. I was glad when we stopped to water the horses and take a little time to just wait. Colonel Hatch, I think truth be told, was glad to get out of that sun much as the rest of us. I don't know how he felt, being a white man and having to command a bunch of colored, but he didn't seem bothered by it a'tall, and seemed proud of us and himself, which, of course, made us all feel mighty good.

So we waited out there on the creek, and Hatch, he come over to where me and The Former House Nigger were sitting by the water, and we jumped to attention, and he said, "There's a patch of scrub oaks off the creek, scattering out there across the grass, and they ain't growin' worth a damn. Them's gonna be your concern. I'm gonna take the rest

of the troop out across the ground there, see if we can pick up some deer trails. I figure ain't no one gonna mind if we pot a few and bring them back to camp. And besides, I'm bored. But we could use some firewood, and I was wantin' you fellas to get them scrubs cut down and sawed up and ready to take back to the fort. Stack them in here amongst the trees, and I'll send out some men with a wagon when we get back, and have that wood hauled back before it's good and dark. I thought we could use some oak to smoke the meat I'm plannin' on gettin'. That's why I'm the goddamn colonel. Always thinkin'."

"What if you don't get no meat?" one of the men with us said.

"Then you did some work for nothin', and I went huntin' for nothin'. But, hell, I seen them deer with my binoculars no less than five minutes ago. Big fat deer, about a half dozen of them running along. They went over the hill. I'm gonna take the rest of the troops with me in case I run into hostiles, and because I don't like to do no skinnin' of dead deer myself."

"I like to hunt," I said.

"That's some disappointin' shit for you," Colonel Hatch said. "I need you here. In fact, I put you in charge. You get bit by a snake and die, then, you, The Former House Nigger, take over. I'm also gonna put Rutherford, Bill, and Rice in your charge . . . some others. I'll take the rest of them. You get that wood cut up, you start on back to the fort and we'll send out a wagon."

"What about Indians?" Rutherford, who was nearby, said.

"You seen any Indians since you been here?" Hatch said.

"No, sir."

"Then there ain't no Indians."

"You ever see any?" Rutherford asked Hatch.

"Oh, hell yeah. Been attacked by them, and I've attacked them. There's every kind of Indian you can imagine out here from time to time. Kiowa. Apache. Comanche. And there ain't nothin' they'd like better than to have your prickly black scalps on their belts, 'cause they find your hair funny. They think it's like the buffalo. They call you buffalo soldiers on account of it."

"I thought it was because they thought we was brave like the buffalo," I said.

"That figures," Hatch said. "You ain't seen no action for nobody to have no opinion of you. But, we ain't seen an Indian in ages, and ain't seen no sign of them today. I'm startin' to think they've done run out of this area. But, I've thought that before. And Indian, especially a Comanche or an Apache, they're hard to get a handle on. They'll get

after somethin' or someone like it matters more than anything in the world, and then they'll wander off if a bird flies over and they make an omen of it."

Leaving us with them mixed thoughts on Indians and buffalo, Hatch and the rest of the men rode off, left us standing in the shade, which wasn't no bad place to be. First thing we did when they was out of sight was throw off our boots and get in the water. I finally just took all my clothes off and cleaned up pretty good with a bar of lye soap and got dressed. Then leaving the horses tied up in the trees near the creek, we took the mule and the equipment strapped on his back, carried our rifles, and went out to where them scrubs was. On the way, we cut down a couple of saplings and trimmed some limbs, and made us a kind of pull that we could fasten onto the mule. We figured we'd fill it up with wood and get the mule to drag it back to the creek, pile it, and have it ready for the wagon.

Rigged up, we went to work, taking turns with the saw, two other men working hacking off limbs, one man axing the trimmed wood up so it fit good enough to load. We talked while we worked, and Rutherford said, "Them Indians, some of them is as mean as snakes. They do all kind of things to folks. Cut their eyelids off, cook them over fires, cut off their nut sacks and such. They're just awful."

"Sounds like some Southerners I know," I said.

"My master and his family was darn good to me," The Former House Nigger said.

"They might have been good to you," Rice said, pausing at the saw, "but that still don't make you no horse, no piece of property. You a man been treated like a horse, and you too dumb to know it."

The Former House Nigger bowed up like he was about to fight. I said, "Now, don't do it. He's just talkin'. I'm in charge here, and you two get into it, I'll get it from Hatch, and I don't want that, and won't have it."

Rice tilted his hat back. His face looked dark as coffee. "I'm gonna tell you true. When I was sixteen, I cut my master's throat and raped his wife and run off to the North."

"My God," The Former House Nigger said. "That's awful."

"And I made the dog suck my dick," Rice said.

"What?" The Former House Nigger said.

"He's funnin' you," I said.

"That part about the master's throat," Rice said, "and runnin' off to the North. I really did that. I would have raped his wife, but there wasn't any time. His dog didn't excite me none."

"You are disgustin'," The Former House Nigger said, pausing from his job of trimming limbs with a hatchet.

“Agreed,” I said.

Rice chuckled, and went back to sawin’ with Rutherford. He had his shirt off, and the muscles in his back bunched up like prairie dogs tunnelin’, and over them mounds was long, thick scars. I knew them scars. I had a few. They had been made with a whip.

Bill, who was stackin’ wood, said, “Them Indians. Ain’t no use hatin’ them. Hatin’ them for bein’ what they is, is like hatin’ a bush ‘cause it’s got thorns on it. Hatin’ a snake ‘cause it’ll bite you. They is what they is just like we is what we is.”

“And what is we?” The Former House Nigger said.

“Ain’t none of us human beings no ‘count. The world is just one big mess of no ‘counts, so there ain’t no use pickin’ one brand of man or woman over the other. Ain’t none of them worth a whistlin’ fart.”

“Ain’t had it so good, have you, Bill?” I asked.

“I was a slave.”

“We all was,” I said.

“Yeah, but I didn’t take it so good. Better’n Rutherford, but not so good. I was in the northern army, right there at the end when they started lettin’ colored in, and I killed and seen men killed. Ain’t none of my life experience give me much of a glow about folks of any kind. I even killed buffalo just for the tongues rich folks wanted to have. We left hides and meat in the fields to rot. That was to punish the Indians. Damned ole buffalo. Ain’t nothin’ dumber, and I shot them for dollars and their tongues. What kind of human beings does that?”

We worked for about another hour, and then, Dog Den—again, I didn’t name him—one of the other men Hatch left with us, said, “I think we got a problem.”

On the other side of the creek, there was a split in the trees, and you could see through them out into the plains, and you could see the hill Hatch had gone over some hours ago, and comin’ down it at a run was a white man. He was a good distance away, but it didn’t take no eagle eye to see that he was naked as a skinned rabbit, and runnin’ full out, and behind him, whoopin’ and having a good time, were Indians. Apache, to be right on the money, nearly as naked as the runnin’ man. Four of them was on horseback, and there was six of them I could see on foot runnin’ after him. My guess was they had done been at him and had set him loose to chase him like a deer for fun. I guess livin’ out on the plains like they did, with nothin’ but mesquite berries and what food they could kill, you had to have your fun where you could find it.

“They’re funnin’ him,” Rutherford said, figurin’ same as me.

We stood there lookin' for a moment; then I remembered we was soldiers. I got my rifle and was about to bead down, when Rutherford said, "Hell, you can't hit them from here, and neither can they shoot you. We're out of range, and Indians ain't no shots to count for."

One of the runnin' Apaches had spotted us, and he dropped to one knee and pointed his rifle at us, and when he did, Rutherford spread his arms wide, and said, "Go on, shoot, you heathen."

The Apache fired.

Rutherford was wrong. He got it right on the top of the nose and fell over with his arms still spread. When he hit the ground, The Former House Nigger said, "I reckon they been practicin'."

We was up on a hill, so we left the mule and run down to the creek where the horses was, and waded across the little water and laid out between the trees and took aim. We opened up and it sounded like a bunch of mule skinnners crackin' their whips. The air filled with smoke and there was some shots fired back at us. I looked up and seen the runnin' man was makin' right smart time, his hair and johnson flappin' as he run. But then one of the horseback Apaches rode up on him, and with this heavy knotted-looking stick he was carrying, swung and clipped the white fella along the top of the head. I seen blood jump up and the man go down and I could hear the sound of the blow so well, I winced. The Apache let out a whoop and rode on past, right toward us. He stopped to beat his chest with his free hand, and when he did, I took a shot at him. I aimed for his chest, but I hit the horse square in the head and brought him down. At least I had the heathen on foot.

Now, you can say what you want about an Apache, but he is about the bravest thing there is short of a badger. This'n come runnin' right at us, all of us firin' away, and I figure he thought he had him some big magic, 'cause not a one of our shots hit him. It was like he come haint-like right through a wall of bullets. As he got closer, I could see he had some kind of mud paint on his chest and face, and he was whoopin' and carryin' on somethin' horrible. And then he stepped in a hole and went down. Though he was still a goodly distance from us, I could hear his ankle snap like a yanked suspender. Without meaning to, we all went, "Ooooooh." It hurt us, it was so nasty soundin'.

That fall must have caused his magic to fly out of his ass, 'cause we all started firing at him, and this time he collected all our bullets, and was deader than a gov'ment promise before the smoke cleared.

This gave the rest of them Apache pause, and I'm sure, brave warriors or not, a few assholes puckered out there.

Them ridin' Apaches stopped their horses and rode back until they was up on the hill, and the runnin' Indians dropped to the ground and lay there. We popped off a few more shots, but didn't hit nothin', and then I remembered I was in charge. I said, "Hold your fire. Don't waste your bullets."

The Former House Nigger crawled over by me, said, "We showed them."

"They ain't showed yet," I said. "Them's Apache warriors. They ain't known as slackers."

"Maybe Colonel Hatch heard all the shootin'," he said.

"They've had time to get a good distance away. They figured on us cuttin' the wood and leavin' it and goin' back to the fort. So maybe they ain't missin' us yet and didn't hear a thing."

"Dang it," The Former House Nigger said.

I thought we might just mount up and try to ride off. We had more horses than they did, but three of them ridin' after us could still turn out bad. We had a pretty good place as we was, amongst the trees with water to drink. I decided best thing we could do was hold our position. Then that white man who had been clubbed in the head started moaning. That wasn't enough, a couple of the braves come up out of the grass and ran at his spot. We fired at them, but them Spencer single shots didn't reload as fast as them Indians could run. They come down in the tall grass where the white man had gone down, and we seen one of his legs jump up like a snake, and go back down, and the next moment came the screaming.

It went on and on. Rice crawled over to me and said, "I can't stand it. I'm gonna go out there and get him."

"No, you're not," I said. "I'll do it."

"Why you?" Rice said.

"Cause I'm in charge."

"I'm goin' with you," The Former House Nigger said.

"Naw, you ain't," I said. "I get rubbed out, you're the one in charge. That's what Colonel Hatch said. I get out there a ways, you open up on them other Apache, keep 'em busier than a bear with a hive of bees."

"Hell, we can't even see them, and the riders done gone on the other side of the hill."

"Shoot where you think they ought to be, just don't send a blue whistler up my ass."

I laid my rifle on the ground, made sure my pistol was loaded, put it back in the holster, pulled my knife, stuck it in my teeth, and crawled to my left along the side of that creek till I come to tall grass, then I

worked my way in. I tried to go slow as to make the grass seem to be moved by the wind, which had picked up considerable and was helpin' my sneaky approach.

As I got closer to where the white man had gone down and the Apaches had gone after him, his yells grew somethin' terrible. I was maybe two or three feet from him. I parted the grass to take a look, seen he was lying on his side, and his throat was cut, and he was dead as he was gonna get.

Just a little beyond him, the two Apache was lying in the grass, and one of them was yellin' like he was the white man bein' tortured, and I thought, Well, if that don't beat all. I was right impressed.

Then the Apache saw me. They jumped up and come for me. I rose up quick, pulling the knife from my teeth. One of them hit me like a cannon ball, and away we went rollin'.

A shot popped off and the other Apache did a kind of dance, about four steps, and went down holdin' his throat. Blood was flying out of him like it was a fresh-tapped spring. Me and the other buck rolled in the grass and he tried to shoot me with a pistol he was totin', but only managed to singe my hair and give me a headache and make my left ear ring.

We rolled around like a couple of doodlebugs, and then I came up on top and stabbed at him. He caught my hand. I was holding his gun hand to the ground with my left, and he had hold of my knife hand.

"Jackass," I said, like this might so wound him to the quick, he'd let go. He didn't. We rolled over in the grass some more, and he got the pistol loose and put it to my head, but the cap and ball misfired, and all I got was burned some. I really called him names then. I jerked my legs up and wrapped them around his neck, yanked him down on his back, got on top of him and stabbed him in the groin and the belly, and still he wasn't finished.

I put the knife in his throat, and he gave me a look of disappointment, like he's just realized he'd left somethin' cookin' on the fire and ought to go get it; then he fell back.

I crawled over, rolled the white man on his back. They had cut his balls off and cut his stomach open and sliced his throat. He wasn't gonna come around.

I made it back to the creek bank and was shot at only a few times by the Apache. My return trip was a mite brisker than the earlier one. I only got a little bit of burn from a bullet that grazed the butt of my trousers.

When I was back at the creek bank, I said, "Who made that shot on the Apache?"

“That would be me,” The Former House Nigger said.

“Listen here, I don’t want you callin’ yourself The Former House Nigger no more. I don’t want no one else callin’ you that. You’re a buffalo soldier, and a good’n. Rest of you men hear that?”

The men was strung out along the creek, but they heard me, and grunted at me.

“This here is Cullen. He ain’t nothing but Cullen or Private Cullen, or whatever his last name is. That’s what we call him. You hear that, Cullen? You’re a soldier, and a top soldier at that.”

“That’s good,” Cullen said, not so moved about the event as I was. “But, thing worryin’ me is the sun is goin’ down.”

“There’s another thing,” Bill said, crawlin’ over close to us. “There’s smoke over that hill. My guess is it ain’t no cookout.”

I figured the source of that smoke would be where our white fella had come from, and it would be what was left of whoever he was with or the remains of a wagon or some such. The horse-ridin’ Apache had gone back there either to finish them off and torture them with fire or to burn a wagon down. The Apache was regular little fire starters, and since they hadn’t been able to get to all of us, they was takin’ their misery out on what was within reach.

As that sun went down, I began to fret. I moved along the short line of our men and decided not to space them too much, but not bunch them up either. I put us about six feet apart and put a few at the rear as lookouts. Considerin’ there weren’t many of us, it was a short line, and them two in the back was an even shorter line. Hell, they wasn’t no line at all. They was a couple of dots.

The night crawled on. A big frog began to bleat near me. Crickets was sawin’ away. Upstairs, the black-as-sin heavens was lit up with stars and the half moon was way too bright.

Couple hours crawled on, and I went over to Cullen and told him to watch tight, ’cause I was goin’ down the line and check the rear, make sure no one was sleepin’ or pullin’ their johnsons. I left my rifle and unsnapped my revolver holster flap, and went to check.

Bill was fine, but when I come to Rice, he was facedown in the dirt. I grabbed him by the back of his collar and hoisted him up, and his head fell near off. His throat had been cut. I wheeled, snappin’ my revolver into my hand. Wasn’t nothin’ there.

A horrible feelin’ come over me. I went down the row. All them boys was dead. The Apache had been pickin’ ’em off one at a time, and doin’ it so careful like, the horses hadn’t even noticed.

I went to the rear and found that the two back there was fine. I said,

“You fellas best come with me.”

We moved swiftly back to Cullen and Rice, and we hadn't no more than gone a few paces, when a burst of fire cut the night. I saw an Apache shape grasp at his chest and fall back. Runnin' over, we found Cullen holding his revolver, and Bill was up waving his rifle around. “Where are they? Where the hell are they?”

“They're all around. They've done killed the rest of the men.” I said.

“Ghosts,” Bill said. “They're ghosts.”

“What they are is sneaky,” I said. “It's what them fellas do for a livin'.”

By now, I had what you might call some real goddamn misgivin's, figured I had reckoned right on things. I thought we'd have been safer here, but them Apache had plumb snuck up on us, wiped out three men without so much as leavin' a fart in the air. I said, “I think we better get on our horses and make a run for it.”

But when we went over to get the horses, Satan, soon as I untied him, bolted and took off through the wood and disappeared. “Now, that's the shits,” I said.

“We'll ride double,” Cullen said.

The boys was gettin' their horses loose, and there was a whoop, and an Apache leapfrogged over the back of one of them horses and came down on his feet with one of our own hatchets in his hand. He stuck the blade of it deep in the head of a trooper, a fella whose name I don't remember, being now in my advanced years, and not really havin' known the fella that good in the first place. There was a scramble, like startled quail. There wasn't no military drill about it. It was every sonofabitch for himself. Me and Cullen and Bill tore up the hill, 'cause that was the way we was facin'. We was out of the wooded area now, and the half moon was bright, and when I looked back, I could see an Apache coming up after us with a knife in his teeth. He was climbin' that hill so fast, he was damn near runnin' on all fours.

I dropped to one knee and aimed and made a good shot that sent him tumbling back down the rise. Horrible thing was, we could hear the other men in the woods down there gettin' hacked and shot to pieces, screamin' and a pleadin', but we knew wasn't no use in tryin' to go back down there. We was outsmarted and outmanned and outfought.

Thing worked in our favor, was the poor old mule was still there wearing that makeshift harness and carry-along we had put him in, with the wood stacked on it. He had wandered a bit, but hadn't left the area.

Bill cut the log rig loose, and cut the packing off the mule's back; then he swung up on the beast and pulled Cullen up behind him, which

showed a certain lack of respect for my leadership, which, frankly, was somethin' I could agree with.

I took hold of the mule's tail, and off we went, them ridin', and me runnin' behind holdin' to my rifle with one hand, holdin' on to the mule's tail with the other, hopin' he didn't fart or shit or pause to kick. This was an old Indian trick, one we had learned in the cavalry. You can also run alongside, you got somethin' to hang on to. Now, if the horse, or mule, decided to run full out, well, you was gonna end up with a mouth full of sod, but a rider and a horse and a fella hangin', sort of lettin' himself be pulled along at a solid speed, doin' big strides, can make surprisin' time and manage not to wear too bad if his legs are strong.

When I finally chanced a look over my shoulder, I seen the Apache were comin', and not in any Sunday picnic stroll sort of way either. They was all on horseback. They had our horses to go with theirs. Except Satan. That bastard hadn't let me ride, but he hadn't let no one else ride either, so I gained a kind of respect for him.

A shot cut through the night air, and didn't nothin' happen right off, but then Bill eased off the mule like a candle meltin'. The shot had gone over Cullen's shoulder and hit Bill in the back of the head. We didn't stop to check his wounds. Cullen slid forward, takin' the reins, slowed the mule a bit and stuck out his hand. I took it, and he helped me swing up behind him. There's folks don't know a mule can run right swift, it takes a mind to, but it can. They got a gait that shakes your guts, but they're pretty good runners. And they got wind and they're about three times smarter than a horse.

What they don't got is spare legs for when they step in a chuckhole, and that's what happened. It was quite a fall, and I had an idea then how that Apache had felt when his horse had gone out from under him. The fall chunked me and Cullen way off and out into the dirt, and it damn sure didn't do the mule any good.

On the ground, the poor old mule kept tryin' to get up, but couldn't. He had fallen so that his back was to the Apache, and we was tossed out in the dirt, squirmin'. We crawled around so we was between his legs, and I shot him in the head with my pistol and we made a fort of him. On came them Apache. I took my rifle and laid it over the mule's side and took me a careful bead, and down went one of them. I fired again, and another hit the dirt. Cullen scuttled out from behind the mule and got hold of his rifle where it had fallen, and crawled back. He fired off a couple of shots, but wasn't as lucky as me. The Apache backed off, and at a distance they squatted down beside their horses and took pot shots at us.

The mule was still warm and he stunk. Bullets were splatterin' into his body. None of them was comin' through, but they was lettin' out a lot of gas. Way I had it figured, them Indians would eventually surround us and we'd end up with our hair hangin' on their wickiups by mornin'. Thinkin' on this, I made an offer to shoot Cullen if it looked like we was gonna be overrun.

"Well, I'd rather shoot you then shoot myself," he said.

"I guess that's a deal, then," I said.

It was a bright night and they could see us good, but we could see them good too. The land was flat there, and there wasn't a whole lot of creepin' up they could do without us noticin', but they could still outflank us because they outnumbered us. There was more Apache now than we had seen in the daytime. They had reinforcements. It was like a gatherin' of ants.

The Apache had run their horses all out, and now there was no water for them, so they cut the horse's throats and lit a fire. After a while we could smell horse meat sizzlin'. The horses had been killed so that they made a ring of flesh they could hide behind, and the soft insides was a nice late supper.

"They ain't got no respect for gov'ment property," Cullen said.

I got out my knife and cut the mule's throat, and he was still fresh enough blood flowed, and we put our mouths on the cut and sucked out all we could. It tasted better than I would have figured, and it made us feel a mite better too, but with there just bein' the two of us, we didn't bother to start a fire and cook our fort.

We could hear them over there laughin' and a cuttin' up, and I figure they had them some mescal, 'cause after a bit, they was actually singin' a white man song, "Row, row, row you boat," and we had to listen to that for a couple of hours.

"Goddamn missionaries," I said.

After a bit, one of them climbed over a dead horse and took his breechcloth down and turned his ass to us and it winked dead-white in the moonlight, white as any Irishman's ass. I got my rifle on him, but for some reason I couldn't let the hammer down. It just didn't seem right to shoot some drunk showin' me his ass. He turned around and peed, kind of pushin' his loins out, like he was doin' a squaw, and laughed, and that was enough. I shot that sonofabitch. I was aimin' for his pecker, but I think I got him in the belly. He fell over and a couple of Apache come out to get him. Cullen shot one of them, and the one was left jumped over the dead horses and disappeared behind them.

“Bad enough they’re gonna kill us,” Cullen said, “but they got to act nasty too.”

We laid there for a while. Cullen said, “Maybe we ought to pray for deliverance.”

“Pray in one hand, shit in the other, and see which one fills up first.”

“I guess I won’t pray,” he said. “Or shit. Least not at the moment. You remember, that’s how we met. I was—”

“I remember,” I said.

Well, we was waitin’ for them to surround us, but like Colonel Hatch said, you can never figure an Apache. We laid there all night, and nothin’ happen. I’m ashamed to say, I nodded off, and when I awoke it was good and daylight and hadn’t nobody cut our throats or taken our hair.

Cullen was sittin’ with his legs crossed, lookin’ in the direction of the Apache. I said, “Damn, Cullen. I’m sorry. I fell out.”

“I let you. They’re done gone.”

I sat up and looked. There was the horses, buzzards lightin’ on them, and there were a few of them big ole birds on the ground eyeballin’ our mule, and us. I shooed them, said, “I’ll be damn. They just packed up like a circus and left.”

“Yep. Ain’t no rhyme to it. They had us where they wanted us. Guess they figured they’d lost enough men over a couple of buffalo soldiers, or maybe they saw a bird like Colonel Hatch was talkin’ about, and he told them to take themselves home.”

“What I figure is they just too drunk to carry on, and woke up with hangovers and went somewhere cool and shaded to sleep it off.”

“Reckon so,” Cullen said. Then: “Hey, you mean what you said about me bein’ a top soldier and all?”

“You know it.”

“You ain’t a colonel or nothin’, but I appreciate it. Course, I don’t feel all that top right now.”

“We done all we could do. It was Hatch screwed the duck. He ought not have separated us from the troop like that.”

“Don’t reckon he’ll see it that way,” Cullen said.

“I figure not,” I said.

We cut off chunks of meat from the mule and made a little fire and filled our bellies, then we started walkin’. It was blazin’ hot, and still we walked. When nightfall come, I got nervous, thinkin’ them Apache might be comin’ back, and that in the long run they had just been funnin’ us. But they didn’t show, and we took turns sleepin’ on the hard plains.

Next mornin' it was hot, and we started walkin'. My back hurt and my ass was draggin' and my feet felt like someone had cut them off. I wished we had brought some of that mule meat with us. I was so hungry, I could see cornbread walkin' on the ground. Just when I was startin' to imagine pools of water and troops of soldiers dancin' with each other, I seen somethin' that was a little more substantial.

Satan.

I said to Cullen, "Do you see a big black horse?"

"You mean, Satan?"

"Yep."

"I see him."

"Did you see some dancin' soldiers?"

"Nope."

"Do you still see the horse?"

"Yep, and he looks strong and rested. I figure he found a water hole and some grass, the sonofabitch."

Satan was trottin' along, not lookin' any worse for wear. He stopped when he seen us, and I tried to whistle to him, but my mouth was so dry, I might as well have been trying to whistle him up with my asshole.

I put my rifle down and started walkin' toward him, holdin' out my hand like I had a treat. I don't think he fell for that, but he dropped his head and let me walk up on him. He wasn't saddled, as we had taken all that off when we went to cut wood, but he still had his bridle and reins. I took hold of the bridle. I swung onto his back, and then he bucked. I went up and landed hard on the ground. My head was spinnin', and the next thing I know, that evil bastard was nuzzlin' me with his nose.

I got up and took the reins and led him over to where Cullen was leanin' on his rifle. "Down deep," he said, "I think he likes you."

We rode Satan double back to the fort, and when we got there, a cheer went up. Colonel Hatch come out and shook our hands and even hugged us. "We found what was left of you boys this mornin', and it wasn't a pretty picture. They're all missin' eyes and balls sacks and such. We figured you two had gone under with the rest of them. Was staked out on the plains somewhere with ants in your eyes. We got vengeful and started trailin' them Apache, and damn if we didn't meet them comin' back toward us, and there was a runnin' fight took us in the direction of the Pecos. We killed one, but the rest of them got away. We just come ridin' in a few minutes ahead of you."

"You'd have come straight on," Cullen said, "you'd have seen us. And we killed a lot more than one."

“That’s good,” Hatch said, “and we want to hear your story and Nate’s soon as you get somethin’ to eat and drink. We might even let you have a swallow of whiskey. Course, Former House Nigger here will have to do the cookin’, ain’t none of us any good.”

“That there’s fine,” I said, “but, my compadre here, he ain’t The Former House Nigger. He’s Private Cullen.”

Colonel Hatch eyeballed me. “You don’t say?”

“Yes sir, I do, even if it hair lips the United States Army.”

“Hell,” Hatch said. “That alone is reason to say it.”

There ain’t much to tell now. We said how things was, and they did some investigatin’, and damn if we wasn’t put in for medals. We didn’t never get them, ’cause they was slow about given coloreds awards, and frankly, I didn’t think we deserved them, not with us breakin’ and runnin’ the way we did, like a bunch of little girls tryin’ to get in out of the rain, leavin’ them men behind. But we didn’t stress that part when we was tellin’ our story. It would have fouled it some, and I don’t think we had much choice other than what we did. We was as brave as men could be without gettin’ ourselves foolishly killed.

Still, we was put in for medals, and that was somethin’. In time, Cullen made the rank of Top Soldier. It wasn’t just me tellin’ him no more. It come true. He become a sergeant, and would have made a good one too, but he got roarin’ drunk and set fire to a dead pig and got his stripes taken and spent some time in the stockade. But that’s another story.

I liked the cavalry right smart myself, and stayed on there until my time run out and I was supposed to sign up again, and would have too, had it not been for them Chinese women I told you about at the first. But again, that ain’t this story. This is the one happened to me in the year of 1870, out there on them hot West Texas plains. I will add a side note. The army let me keep Satan when I was mustered out, and I grew to like him, and he was the best horse I ever had, and me and him became friends of a sort, until 1872, when I had to shoot him and feed him to a dog and a woman I liked better.

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ABOUT THE AUTHOR

Prolific Texas writer **Joe R. Lansdale** has won the Edgar Award, the British Fantasy Award, the American Horror Award, the American Mystery Award,

the International Crime Writer's Award, and six Bram Stoker Awards. Although perhaps best known for horror/thrillers such as *The Nightrunners*, *Bubba Ho-Tep*, *The Bottoms*, *The God of the Razor*, and *The Drive-In*, he also writes the popular Hap Collins and Leonard Pine mystery series—*Savage Season*, *Mucho Mojo*, *The Two-Bear Mambo*, *Bad Chili*, *Rumble Tumble*, *Captains Outrageous*, *Devil's Road*, and *Hyenias*—as well as Western novels such as *Texas Night Rider* and *Blooddance*, and totally unclassifiable cross-genre novels such as *Zeppelins West*, *The Magic Wagon*, and *Flaming London*. His other novels include *Dead in The West*, *The Big Blow*, *Sunset and Sawdust*, *Acts of Love*, *Freezer Burn*, *Waltz of Shadows*, *The Drive-In 2: Not Just One of Them Sequels*, *Leather Maiden*, *Damaged by Choice*, and *Edge of Dark Water*. He has also contributed novels to series such as Batman and Tarzan. His many short stories have been collected in *By Bizarre Hands*, *Tight Little Stitches on a Dead Man's Back*, *The Shadows Kith and Kin*, *The Long Ones*, *Stories by Mama Lansdale's Youngest Boy*, *Bestsellers Guaranteed*, *On the Far Side of the Cadillac Desert with the Dead Folks*, *Electric Gumbo*, *Writer of the Purple Rage*, *Fist Full of Stories*, *Steppin' Out*, *Summer '68*, *Bumper Crop*, *The Good, the Bad and the Indifferent*, *Selected Stories by Joe R. Lansdale*, *For a Few Stories More*, *Mad Dog Summer: And Other Stories*, *The King and Other Stories*, *Deadman's Road*, an omnibus, *Flaming Zeppelins: The Adventures of Ned the Seal*, *Shadows West* (with John L. Lansdale), *Trapped in the Sunday Matinee* and *High Cotton: the Collected Stories of Joe R. Lansdale*. As editor, he has produced the anthologies *The Best of the West*, *Retro Pulp Tales*, *Son of Retro Pulp Tales*, *Razored Saddles* (with Pat LoBrutto), *Dark At Heart: All New Tales of Dark Suspense* (with wife Karen Lansdale), *The Horror Hall of Fame: The Stoker Winners*, the Robert E. Howard tribute anthology, *Cross Plains Universe* (with Scott A. Cupp), *Crucified Dreams*, and *The Urban Fantasy Anthology* (edited with Peter S. Beagle). An anthology in tribute to Lansdale's work is *Lords of the Razor*. His most recent books are a new Hap and Leonard novel, *Dead Aim*, *The Thicket*, *The Ape Man's Brother*, and a big retrospective collection, *Bleeding Shadows*. He lives with his family in Nacogdoches, Texas.

The Girl-Thing Who Went Out for Sushi

PAT CADIGAN

Nine decs into her second hitch, Fry hit a berg in the Main ring and broke her leg. And she didn't just splinter the bone—compound fracture! Yow! What a mess! Fortunately, we'd finished servicing most of the eyes, a job that I thought was more busywork than work-work. But those were the last decs before Okeke-Hightower hit and everybody had comet fever.

There hadn't been an observable impact on the Big J for almost three hundred (Dirt) years—Shoemaker-Somethingorother—and no one was close enough to get a good look back then. Now every news channel, research institute, and moneybags everywhere in the solar system was paying Jovian Operations for a ringside view. Every JovOp crew was on the case, putting cameras on cameras and backup cameras on the backup cameras—visible, infrared, X-ray, and everything else. Fry was pretty excited about it herself, talking about how great it was she would get to see it live. Girl-thing should have been watching where she wasn't supposed to be going.

I was coated and I knew Fry's suit would hold, but featherless bipeds are prone to vertigo when they're injured. So I blew a bubble big enough for both of us, cocooned her leg, pumped her full of drugs, and called an ambulance. The jellie with the rest of the crew was already on the other side of the Big J. I let them know we'd scrubbed and someone would have to finish the last few eyes in the radian for us. Girl-thing was one hell of a stiff two-stepper, staying just as calm as if we were unwinding end-of-shift. The only thing she seemed to have a little trouble with was the O. Fry picked up consensus orientation faster than any other two-stepper I'd ever worked with but she'd never done

it on drugs. I tried to keep her distracted by telling her all the gossip I knew and when I ran out, I made shit up.

Then all of a sudden, she said, “Well, Arkae, that’s it for me.”

Her voice was so damned final, I thought she was quitting. And I deflated because I had taken quite a liking to our girl-thing. I said, “Aw, honey, we’ll all miss you out here.”

But she laughed. “No, no, no, I’m not leaving. I’m going out for sushi.”

I gave her a pat on the shoulder, thinking it was the junk in her system talking. Fry was no ordinary girl-thing—she was great out here but she’d always been special. Back in the Dirt, she’d been a brain-box, top-level scholar *and* a beauty queen. That’s right—a featherless biped genius beauty queen. Believe it or leave it, as Sheerluck says.

Fry’d been with us for three and half decs when she let on about being a beauty queen. The whole crew was unwinding end-of-shift—her, me, Dubonnet, Sheerluck, Aunt Chovie, Splat, Bait, Glynis, and Fred—and we all about lost the O.

“Wow,” said Dubonnet, “did you ask for whirled peas, too?” I didn’t understand the question but it sounded like a snipe. I triple-smacked him and suggested he respect someone else’s culture.

But Fry said, “No, I don’t blame any a youse asking. That stuff really is so silly. Why people still bother with such things, I sure don’t know. We’re supposed to be so advanced and enlightened and it still matters how a woman looks in a bathing suit. Excuse me, a biped woman,” she added, laughing a little. “And no, the subject of whirled peas never came up.”

“If that’s how you really felt,” Aunt Chovie said, big, serious eyes and all eight arms in curlicues, “why’d you go along with it?”

“It was the only way I could get out here,” Fry said.

“Not really?” said Splat, a second before I woulda blurted out the same thing.

“Yes, really. I got heavy metal for personal appearances and product endorsements, plus a full scholarship, my choice of school.” Fry smiled and I thought it was the way she musta smiled when she was crowned Queen of the Featherless Biped Lady Geniuses or whatever it was. It wasn’t insincere, but a two-stepper’s face is just another muscle group; I could tell it was something she’d learned to do. “I saved as much as I could so I’d have enough for extra training after I graduated. Geology degree.”

“Dirt geology though,” said Sheerluck. It used to be Sherlock but Sheerluck’ll be the first to admit she’s got more luck than sense.

“That’s why I saved for extra training,” Fry said. “I had to do the best I could with the tools available. You know how that is. All-a-youse know.”
We did.

Fry had worked with some other JovOp crews before us, all of them mixed—two-steppers and sushi. I guess they all liked her and vice versa but she clicked right into place with us, which is pretty unusual for a biped and an all-octo crew. I liked her right away and that’s saying something because it usually takes me a while to resonate even with sushi. I’m okay with featherless bipeds, I really am. Plenty of sushi—more than will admit to it—have a problem with the species just on general principle, but I’ve always been able to get along with them. Still, they aren’t my fave flave to crew with out here. Training them is harder, and not because they’re stupid. Two-steppers just aren’t made for this. Not like sushi. But they keep on coming and most of them tough it out for at least one square dec. It’s as beautiful out here as it is dangerous. I see a few outdoors almost every day, clumsy starfish in suits.

That’s not counting the ones in the clinics and hospitals. Doctors, nurses, nurse-practitioners, technicians, physiotherapists, paramedics—they’re all your standard featherless biped. It’s the law. Fact: you *cannot* legally practice any kind of medicine in any form other than basic human, not even if you’re already a doctor, supposedly because all the equipment is made for two-steppers. Surgical instruments, operating rooms, sterile garments, even rubber gloves—the fingers are too short and there aren’t enough of them. Ha, ha, a little sushi humor. Maybe it’s not that funny to you but fresh catch laugh themselves sick.

I don’t know how many two-steppers in total go out for sushi in a year (Dirt or Jovian), let alone how their reasons graph, but we’re all over the place out here and Census isn’t in my orbit, so for all I know half a dozen two-steppers apply every eight decs. Stranger things have happened.

In the old days, when I turned, nobody did it unless they had to. Most often, it was either terminal illness or permanent physical disability as determined by the biped standard: i.e., conditions at sea level on the third planet out. Sometimes, however, the disability was social, or more precisely, legal. Original Generation out here had convicts among the gimps, some on borrowed time.

Now, if you ask us, we say OG lasted six years but we’re all supposed to use the Dirt calendar, even just to each other (everyone out here gets good at converting on the fly), which works out to a little over seventy by Dirt reckoning. The bipeds claim that’s three generations not just

one. We let them have that their way, too, because, damn can they argue. About *anything*. It's the way they're made. Bipeds are strictly binary, it's all they know: zero or one, yes or no, right or wrong.

But once you turn, that strictly binary thinking's the first thing to go, and fast. I never heard anyone say they miss it; I know I don't.

Anyway, I go see Fry in one of the Gossamer ring clinics. A whole wing is closed off, no one gets in unless they're on The List. If that isn't weird enough for you, there's a two-stepper in a uniform stuck to the floor, whose only job is checking The List. I'm wondering if I'm in the wrong station, but the two-stepper finds me on The List and I may go in and see La Soledad y Godmundsdottir. It takes me a second to get who she means. How'd our girl-thing get Fry out of that? I go through an airlock-style portal and there's another two-stepper waiting to escort me. He uses two poles with sticky tips to move himself along and he does all right but I can see this is a new skill. Every so often, he maneuvers so one foot touches floor so he can feel more like he's walking.

When you've been sushi as long as I have, two-steppers are pretty transparent. I don't mean that as condescending as it sounds. After all, I was a two-stepper once myself. We all started out as featherless bipeds, none of us was born sushi. But a lot of us feel we were born to *be* sushi, a sentiment that doesn't go down too well with the two-steppers who run everything. Which doesn't make it any less true.

My pal the Poler and I go a full radian before we get to another airlock. "Through there," he says. "I'll take you back whenever you're ready."

I thank him and swim through, wondering what dim bulb thought he was a good idea, because he's what Aunt Chovie calls surplus to requirements. The few conduits off this tube are sealed and there's nothing to hide in or behind. I know Fry is so rich that she has to hire people to spend her money for her, but I'm thinking she should hire people smart enough to know the difference between spending and wasting.

There's our girl, stuck to the middle of a hospital bed almost as big as the ringberg that put her in it. She's got a whole ward to herself—all the walls are folded back to make one big private room. There are some nurses down at the far end, sitting around sipping coffee bulbs. When they hear me come in, they start unsticking and reaching for things but I give them a full eight-OK—*Social call, I'm nobody, don't look busy on my account*—and they all settle down again.

Sitting up in her nest of pillows, Fry looks good, if a little undercooked. There's about three centimeters of new growth on her head and it must be

itchy because she keeps scratching it. In spite of the incubator around her leg, she insists I give her a full hug, four by four, then pats a spot beside her. “Make yourself to home, Arkae.”

“Isn’t there a rule about visitors sitting on the bed?” I say, curling a couple of arms around a nearby hitching-post. It’s got a foldout seat for biped visitors. This place has everything.

“Yeah. The rule is, it’s okay if I say it’s okay. Check it—this bed’s bigger than a lot of apartments I’ve had. The whole crew could have a picnic here. In fact, I wish they would.” She droops a little. “How is everyone, really busy?”

I settle down. “There’s always another lab to build or hardware to service or data to harvest,” I say, careful, “if that’s what you mean.” The way her face flexes, I know it isn’t.

“You’re the only one who’s come to see me,” she says.

“Maybe the rest of the crew weren’t on The List.”

“What list?” she says. So I tell her. Her jaw drops and all at once, two nurses appear on either side of the bed, nervous as hell, asking if she’s all right. “I’m fine, I’m fine,” she snaps at them. “Go away, gimme some privacy, will you?”

They obey a bit reluctantly, eyeing me like they’re not too sure about how safe she is with me squatting on the bedspread.

“Don’t yell at *them*,” I say after a bit. “Something bad happens to you, it’s their fault. They’re just taking care of you the best way they know how.” I uncurl two arms, one to gesture at the general surroundings and the other to point at the incubator, where a quadjillion nanorectics are mending her leg from the marrow out, which, I can tell you from personal experience, *itches*. A *lot*. No doubt that’s contributing to her less-than-sparkly disposition—what the hell can you do about itchy *bone marrow*?—and what I just told her doesn’t help.

“I should have known,” she fumes, scratching her head. “It’s the people I work for.”

That doesn’t make sense. JovOp couldn’t afford anything like this. “I think you’re a little confused, honey,” I say. “If we even *thought* JovOp had metal that heavy, it’d be Sushi Bastille Day, heads would—”

“No, these people are back in the Dirt. My image is licensed for advertising and entertainment,” she says, “I thought there’d be less demand after I came out here—out of sight, out of mind, you know? But apparently the novelty of a beauty queen in space has yet to wear off.”

“So you’re still rich,” I say. “Is that so bad?”

She makes a pain face. “Would you agree to an indefinite contract just to be rich? Even *this* rich?”

“You couldn’t get rich on an indefinite contract,” I say gently, “and no union’s stupid enough to let anybody take one.”

She thinks for a few seconds. “All right, how about this: did you ever think you owned something and then you found out it owned you?”

“Oh . . .” Now I get it. “Can they make you go back?”

“They’re trying,” Fry says. “A court order arrived last night, demanding I hit the Dirt as soon as I can travel. The docs amended it so *they* decide when it’s safe, but that won’t hold them off forever. You know any good lawyers? Out here?” she added.

“Well, yeah. Of course, they’re all sushi.”

Fry lit up. “Perfect.”

Not every chambered Nautilus out here is a lawyer—the form is also a popular choice for librarians, researchers, and anyone else in a data-heavy line of work—but every lawyer in the Jovian system is a chambered Nautilus. It’s not a legal restriction the way it is with bipeds and medicine, just something that took root and turned into tradition. According to Dove, who’s a partner in the firm our union keeps on retainer, it’s the sushi equivalent of powdered wigs and black robes, which we have actually seen out here from time to time when two-steppers from certain parts of the Dirt bring their own lawyers with them.

Dove says no matter how hard biped lawyers try to be professional, they all break out with some kind of weird around their sushi colleagues. The last time the union had to renegotiate terms with JovOp, the home office sent a can-full of corporate lawyers out of the Dirt. Well, from Mars, actually, but they weren’t Martian citizens and they went straight back to No. 3 afterwards. Dove wasn’t involved but she kept us updated as much as she could without violating any regulations.

Dove’s area is civil law and sushi rights, protecting our interests as citizens of the Jovian system. This includes not only sushi and sushi-in-transition but pre-ops as well. Any two-stepper who files a binding letter of intent for surgical conversion is legally sushi.

Pre-ops have all kinds of problems—angry relatives, *rich* angry relatives with injunctions from some Dirt supreme court, confused/troubled children, heartbroken parents and ex-spouses, lawsuits and contractual disputes. Dove handles all that and more: identity verification, transfer of money and property, biometric resets, as well as arranging mediation, psychological counseling (for anyone, including angry relatives), even religious guidance. Most bipeds would be surprised to know how many of those who go out for sushi find God, or something. Most of us, myself included, fall into the latter

category but there are plenty of the organized religion persuasion. I guess you can't go through a change that drastic without discovering your spiritual side.

Fry wasn't officially a pre-op yet, but I knew Dove would be the best person she could talk to about what she'd be facing if she decided to go through with it. Dove is good at figuring out what two-steppers want to hear and then telling them what they need to hear in a way that makes them listen. I thought it was psychology but Dove says it's closer to linguistics.

As Sheerluck would say, don't ask me, I just lurk here.

The next day, I show up with Dove and List Checker looks like she's never seen anything like us before. She's got our names but she doesn't look too happy about it, which annoys me. List-checking isn't a job that requires any emotion from her.

"You're the attorney?" she says to Dove, who is eye-level with her, tentacles sedately furled.

"Scan me again if you need to," Dove says good-naturedly. "I'll wait. Mom always said, 'Measure twice, cut once.'"

List Checker can't decide what to do for a second or two, then scans us both again. "Yes, I have both your names here. It's just that—well, when she said an attorney, I was expecting—I thought you'd be . . . a . . . a . . ."

She hangs long enough to start twisting before Dove relents and says, "Biped." Dove still sounds good-natured but her tentacles are now undulating freely. "You're not from around here, are you?" she asks, syrupy-sweet, and I almost rupture not laughing.

"No," List Checker says in a small voice. "I've never been farther than Mars before."

"If the biped on the other side of that portal is equally provincial, better warn 'em." Then as we go through, Dove adds, "Too late!"

It's the same guy with the poles but when Dove sees him, she gives this crazy whooping yell and pushes right into his face so her tentacles are splayed out on his skin.

"You son of a bitch!" she says, really happy.

And then the Poler says, "Hiya, Mom."

"Oh. Kay," I say, addressing anyone in the universe who might be listening. "I'm thinking about a brain enema. Is now a good time?"

"Relax," Dove says. "'Hiya Mom' is what you say when anyone calls you a son of a bitch."

"Or 'Hiya, Dad,'" says Poler, "depending."

“Aw, you all look alike to me,” Dove says. “It’s a small universe, Arkae. Florian and I got taken hostage together once, back in my two-stepper days.”

“Really?” I’m surprised as hell. Dove never talks about her biped life; hardly any of us do. And I’ve never heard of anyone running into someone they knew pre-sushi purely by chance.

“I was a little kid,” Poler says. “Ten Dirt-years. Dove held my hand. Good thing I met her when she still had one.”

“He was a creepy little kid,” Dove says as we head for Fry’s room. “I only did it so he wouldn’t scare our captors into killing all of us.”

Poler chuckles. “Then why do you let me keep in touch with you after it was all over?”

“I thought if I could help you be less creepy, you wouldn’t inspire any more hostage-taking. Safer for everybody.”

I can’t remember ever hearing about anyone still being friends with a biped from before they were sushi. I’m still trying to get my mind around it as we go through the second portal.

When Fry sees us, there’s a fraction of a second when she looks startled before she smiles. Actually, it’s more like horrified. Which makes *me* horrified. I told her I was bringing a sushi lawyer. Girl-thing never got hiccups before, not even with the jellies and that’s saying something. Even when you know they’re all AIs, jellies can take some getting used to no matter what shape you’re in, two-stepper or sushi.

“Too wormy?” Dove says and furls her tentacles as she settles down on the bed a respectful distance from Fry.

“I’m sorry,” Fry says, making the pain face. “I don’t mean to be rude or bigoted—”

“Forget about it,” Dove says. “Lizard brain’s got no shame.”

Dove’s wormies bother her more than my suckers? I think, amazed. Lizard brain’s not too logical, either.

“Arkae tells me you want to go out for sushi,” Dove goes on chattily. “How much do you know about it?”

“I know it’s a lot of surgery but I think I have enough money to cover most of it.”

“Loan terms are extremely favorable. You could live well on that money and still make payments—”

“I’d like to cover as much of the cost as I can while my money’s still liquid.”

“You’re worried about having your assets frozen?” Immediately Dove goes from chatty to brisk. “I can help you with that whether you turn or not. Just say I’m your lawyer, the verbal agreement’s enough.”

“But the money’s back in the Dirt—”

“And *you’re* here. It’s all about where *you* are. I’ll zap you the data on loans and surgical options—if you’re like most people, you probably already have a form in mind but it doesn’t hurt to know about all the—”

Fry held up a hand. “Um, Arkae? You mind if I talk to my new lawyer alone?”

My feelings are getting ready to be hurt when Dove says, “Of course she doesn’t. Because she knows that the presence of a third party screws up that confidentiality thing. Right, Arkae?”

I feel stupid and relieved at the same time. Then I see Fry’s face and I know there’s more to it.

The following day the crew gets called up to weed and reseed the Halo. Comet fever strikes again. We send Fry a silly cheer-up video to say we’ll see her soon.

I personally think it’s a waste of time sowing sensors in dust when we’ve already got eyes in the Main ring. Most of the sensors don’t last as long as they’re supposed to and the ones that do never tell us anything we don’t already know. Weeding—picking up the dead sensors—is actually more interesting. When the dead sensors break down, they combine with the dust, taking on odd shapes and textures and even odder colorations. If something especially weird catches my eye, I’ll ask to keep it. Usually, the answer’s no. Recycling is the foundation of life out here—mass in, mass out; create, un-create, recreate, allthat. But once in a while, there’s a surplus of something because nothing evens out exactly all the time, and I get to take a little good-luck charm home to my bunk.

We’re almost at the Halo when the jellie tells us whichever crew seeded last time didn’t weed out the dead ones. So much for mass in, mass out. We’re all surprised; none of us ever got away with doing half a job. We have to hang in the jellie’s belly high over the North Pole and scan the whole frigging Halo for materials markers. Which would be simple except a lot of what should be there isn’t showing up. Fred makes us deep-scan three times but nothing shows on Metis and there’s no sign that anything leaked into the Main ring.

“Musta all fell into the Big J,” says Bait. He’s watching the aurora flashing below us like he’s hypnotized, which he probably is. Bait’s got this thing about the polar hexagon anyway.

“But so many?” Splat says. “You know they’re gonna say that’s too many to be an accident.”

“Do we know *why* the last crew didn’t pick up the dead ones?” Aunt Chovie’s already tensing up. If you tapped on her head, you’d hear high C-sharp.

“No,” Fred says. “I don’t even know which crew it was. Just that it wasn’t us.”

Dubonnet tells the jellie to ask. The jellie tells us it’s put in a query but because it’s not crucial, we’ll have to wait.

“Frigging tube worms,” Splat growls, tentacles almost knotting up. “They do that to feel important.”

“Tube worms are AIs, they don’t feel,” the jellie says with the AI serenity that can get so maddening so fast. “Like jellies.”

Then Glynis speaks up: “Scan Big J.”

“Too much interference,” I say. “The storms—”

“Just humor me,” says Glynis. “Unless you’re in a hurry?”

The jellie takes us down to just above the middle of the Main ring and we prograde double-time. And son of a bitch—is this crazy or is this the new order?—we get some hits in the atmosphere.

But we shouldn’t. It’s not just the interference from the storms—Big J gravitates the hell out of anything it swallows. Long before I went out for sushi (and that was quite a while ago), they’d stopped sending probes into Jupiter’s atmosphere. They didn’t just hang in the clouds and none of them ever lasted long enough to reach liquid metallic hydrogen. Which means the sensors should just be atoms, markers crushed out of existence. They can’t still be in the clouds unless something is keeping them there.

“That’s gotta be a technical fault,” Splat says. “Or something.”

“Yeah, I’m motion sick, I lost the O,” says Aunt Chovie, which is the current crew code for *Semaphore only*.

Bipeds have sign language and old-school semaphore with flags but octo-crew semaphore is something else entirely. Octo-sem changes as it goes, which means each crew speaks a different language, not only from each other, but also from one conversation to the next. It’s not transcribable, either, not like spoken-word communication because it works by consensus. It’s not completely uncrackable but even the best decryption AI can’t do it in less than half a dec. Five days to decode a conversation isn’t exactly efficient.

To be honest, I’m kinda surprised the two-steppers who run JovOp are still letting us get away with it. They’re not what you’d call big champions of privacy, especially on the job. It’s not just sushi, either—all their two-stepper employees, in the Dirt or all the way out here, are under total surveillance when they’re on the clock. That’s total as in a/v everywhere: offices, hallways, closets, and toilets. Bait says that’s why JovOp two-steppers always look so grim—they’re all holding it in till quitting time.

But I guess as long we get the job done, they don't care how we wiggle our tentacles at each other or what color we are when we do it. Besides, when you're on the job out here, you don't want to worry about who's watching you because they'd *better* be. You don't want to die in a bubble waiting for help that isn't coming because nobody caught the distress signal when your jellie blew out.

So anyway, we consider the missing matter and the markers we shouldn't have been picking up on in Big J's storm systems and we whittle it down to three possibilities: the previous crew returned to finish the job but someone forgot to enter it into the record; a bunch of scavengers blew through with a trawler and neutralized the markers so they can resell the raw materials; or some dwarf star at JovOp is seeding the clouds in hope of getting an even closer look at the Okeke-Hightower impact.

Number three is the stupidest idea—even if some of the sensors actually survive till Okeke-Hightower hits, they're in the wrong place, and the storms will scramble whatever data they pick up—so we all agree that's probably it. After a little more discussion, we decide not to let on and when JovOp asks where all the missing sensors are, we'll say we don't know. Because the Jupe's honest truth is, we don't.

We pick up whatever we can find, which takes two J-days, seed the Halo with new ones, and go home. I call over to the clinic to check how Fry's doing and find out if she managed to get the rest of the crew on The List so we can have that picnic on her big fat bed. But I get Dove, who tells me that our girl-thing is in surgery.

Dove says that, at Fry's own request, she's not allowed to tell anyone which sushi Fry's going out for, including us. I feel a little funny about that—until we get the first drone.

It's riding an in-out skeet, which can slip through a jellie double-wall without causing a blowout. JovOp uses them to deliver messages they consider sensitive—whatever that means—and that's what we thought it was at first.

Then it lights up and we're looking at this image of a two-stepper dressed for broadcast. He's asking one question after another on a canned loop; in a panel on his right, instructions on how to record, pause, and playback are scrolling on repeat.

The jellie asks if we want to get rid of it. We toss the whole thing in the waste chute, skeet and all, and the jellie poops it out as a little ball of scrap, to become some scavenger's lucky find.

Later, Dubonnet files a report with JovOp about the unauthorized intrusion. JovOp gives him a receipt but no other response. We're all

expecting a reprimand for failing to detect the skeet's rider before it got through. Doesn't happen.

"Somebody's drunk," Bait says. "Query it."

"No, don't," says Splat. "By the time they're sober, they'll have to cover it up or their job's down the chute. It never happened, everything's eight-by-eight."

"Until someone checks our records," Dubonnet says and tells the jellie to query, who assures him that's a wise thing to do. The jellie has been doing this sort of thing more often lately, making little comments. Personally, I like those little touches.

Splat, however, looks annoyed. "I was joking," he says, enunciating carefully. They can't touch you for joking no matter how tasteless, but it has to be clear. We laugh, just to be on the safe side, except for Aunt Chovie who says she doesn't think it was very funny because she can't laugh unless she really feels it. Some people are like that.

Dubonnet gets an answer within a few minutes. It's a form message in legalese but this gist is, *We heard you the first time, go now and sin no more.*

"They *all* can't be drunk," Fred says. "Can they?"

"Can't they?" says Sheerluck. "You guys have crewed with me long enough to know how fortune smiles on me and mine."

"Spoken like a member of the Church of The Four-Leaf Horseshoe," Glynis says.

Fred perks right up. "Is that that new casino on Europa?" he asks. Fred loves casinos. Not gambling, just casinos. The jellie offers to look it up for him.

"Synchronicity is a real thing, it's got *math*," Sheerluck is saying. Her color's starting to get a little bright; so is Glynis'. I'd rather they don't give each other ruby-red hell while we're all still in the jellie. "And the dictionary definition of serendipity is, 'Chance favors the prepared mind.'"

"*I'm* prepared to go home and log out, who's prepared to join me?" Dubonnet says before Glynis can sneer openly. I like Glynis, vinegar and all, but sometimes I think she should have been a crab instead of an octopus.

Our private quarters are supposed to have no surveillance except for the standard safety monitoring.

Yeah, we don't believe that for a nanosecond. But if JovOp ever got caught in the act, the unions would eat them alive and poop out the bones to fertilize Europa's germ farms. So either they're even better at

it than any of us can imagine or they're taking a calculated risk. Most sushi claim to believe the former; I'm in the latter camp. I mean, they watch us so much already, they've gotta want to look at something else for a change.

We share the typical octo-crew quarters—eight rooms around a large common area. When Fry was with us, we curtained off part of it for her but somehow she was always spilling out of it. Her stuff, I mean—we'd find underwear bobbing around in the lavabo, shoes orbiting a lamp (good thing she only needed two), live-paper flapping around the room in the air currents. All the time she'd spent out here and she still couldn't get the hang of housekeeping in zero gee. It's the sort of thing that stops being cute pretty quickly when you've got full occupancy, plus one. I could tell she was trying, but eventually we had to face the truth: much as we loved her, our resident girl-thing was a slob.

I thought that was gonna be a problem but she wasn't even gone a day before it felt like there was something missing. I'd look around expecting to see some item of clothing or jewelery cruising past, the latest escapee from one of her not-terribly-secure reticules.

“So who wants to bet that Fry goes octo?” Splat says when we get home.

“Who'd want to bet she doesn't?” replies Sheerluck.

“Not me,” says Glynis, so sour I can feel it in my crop. I'm thinking she's going to start again with the crab act, pinch, pinch, pinch but she doesn't. Instead, she air-swims down to the grotto, sticks to the wall with two arms and folds the rest up so she's completely hidden. She misses our girl-thing and doesn't want to talk at the moment, but she also doesn't want to be completely alone, either. It's an octo thing—sometimes we want to be alone but not necessarily by ourselves.

Sheerluck joins me at the fridge and asks, “What do you think? Octo?”

“I dunno,” I say, and I honestly don't. It never occurred to me to wonder but I'm not sure if that's because I took it for granted she would. I grab a bag of kribble.

Aunt Chovie notices and gives me those big serious eyes. “You can't just live on crunchy krill, Arkae.”

“I've got a craving,” I tell her.

“Me too,” says Bait. He tries to reach around from behind me and I knot him.

“Message from Dove,” says Dubonnet just before we start wrestling and puts it on the big screen.

There's not actually much about Fry, except that she's coming along nicely with another dec to go before she's done. Although it's not clear

to any of us whether that means Fry'll be *all* done and good to go, or if Dove's just referring to the surgery. Then we get distracted with all the rest of the stuff in the message.

It's full of clips from the Dirt, two-steppers talking about Fry like they all knew her and what it was like out here and what going out for sushi meant. Some two-steppers didn't seem to care much but some of them were stark spinning bugfuck.

I mean, it's been a great big while since I was a biped and we live so long out here that we tend to morph along with the times. The two-stepper I was couldn't get a handle on me as I am now. But then neither could the octo I was when I finished rehab and met my first crew.

I didn't choose octo—back then, surgery wasn't as advanced and nanorectics weren't as commonplace or as programmable so you got whatever the doctors thought gave you the best chance of a life worth living. I wasn't too happy at first but it's hard to be unhappy in a place this beautiful, especially when you feel so good physically all the time. It was somewhere between three and four J-years after I turned that people could finally choose what kind of sushi they went out for, but I got no regrets. Anymore. I've got it smooth all over.

Only I don't feel too smooth listening to two-steppers chewing the air over things they don't know anything about and puking up words like *abominations*, *atrocities*, and *subhuman monsters*. One news program even runs clips from the most recent remake of *The Goddam Island Of Fucking Dr. Moreau*. Like that's holy writ or something.

I can't stand more than a few minutes before I take my kribble into my bolthole, close the hatch, and hit soundproof.

A little while later, Glynis beeps. "You know how way back in the extreme dead past, people in the Dirt thought everything in the universe revolved around them?" She pauses but I don't answer. "Then the scope of human knowledge expanded and we all know that was wrong."

"So?" I grunt.

"Not everybody got the memo," she says. She waits for me to say something. "Come on, Arkae—are *they* gonna get to see Okeke-Hightower?"

"I'd like to give them a ride on it," I say.

"None of them are gonna come out here with us abominations. They're all gonna cuddle up with each other in the Dirt and drown in each other's shit. Until they all do the one thing they were pooped into this universe to do, which is become extinct."

I open the door. "You're really baiting them, you know that?"

“Baiting who? There’s nobody listening. Nobody here except us sushi,” she says, managing to sound sour and utterly innocent both at the same time. Only Glynis.

I message Dove to say we’ll be Down Under for at least two J-days, on loan to OuterComm. Population in the outer part of the system, especially around Saturn, has doubled in the last couple of J-years and will probably double again in less time. The civil communication network runs below the plane of the solar disk and it’s completely dedicated—no governments, no military, just small business, entertainment, and social interaction. Well, so far, it’s completely dedicated but nobody’s in any position for a power grab yet.

OuterComm is an Ice Giants operation and originally it served only the Saturn, Uranus, and Neptune systems. No one seems to know exactly where the home office is—i.e. which moon. I figure even if they started off as far out as Uranus, they’ve probably been on Titan since they decided to expand to Jupiter.

Anyway, their technology is crazy-great. It still takes something over forty minutes for *Hello* to get from the Big J to Saturn and another forty till you hear, *Who the hell is this?* but you get less noise than a local call on JovOp. JovOp wasn’t too happy when the entertainment services started migrating to OuterComm and things got kind of tense. Then they cut a deal: OuterComm got all the entertainment and stayed out of the education business, at least in the Jovian system. So everything’s fine and JovOp loans them anything they need like a big old friendly neighbor but there’s still plenty of potential for trouble. Of *all* kinds.

The Jovian system is the divide between the inner planets and the outer. We’ve had governments that tried to align with the innies and others that courted the outies. The current government wants the Big J officially designated as an outer world, not just an ally. Saturn’s been fighting it, claiming that Big J wants to take over and build an empire.

Which is pretty much what Mars and Earth said when the last government was trying to get inner status. Earth was a little more colorful about it. There were two-steppers hollering that it was all a plot by monsters and abominations—i.e. us—to get our unholy limbs on fresh meat for our unholy appetites. If Big J got inner planet status, they said, people would be rounded up in the streets and shipped out to be changed into unnatural, subhuman creatures with no will of their own. Except for the most beautiful women, who would be kept as is and chained in brothels where—well, you get the idea.

That alone would be enough to make me vote outie, except the Big J is really neither outie nor innie. The way I see it, there's inner, there's outer, and there's us. Which doesn't fit the way two-steppers do things because it's not binary.

This was all sort of bubbling away at the back of my mind while we worked on the comm station but in an idle sort of way. I was also thinking about Fry, wondering how she was doing, and what shape she'd be in the next time I saw her. I wondered if I'd recognize her.

Now, that sounds kind of silly, I guess because you don't recognize someone that, for all intents and purposes, you've never seen before. But it's that spiritual thing. I had this idea that if I swam into a room full of sushi, all kinds of sushi, and Fry was there, I would know. And if I gave it a little time, I'd find her without anyone having to point her out.

No question, I loved Fry the two-stepper. Now that she was sushi, I wondered if I'd be in love with her. I couldn't decide whether I liked that idea or not. Normally I keep things simple: sex, and only with people I like. It keeps everything pretty smooth. But *in love* complicates everything. You start thinking about partnership and family. And that's not so smooth because we don't reproduce. We've got new sushi and fresh sushi, but no sushi kids.

We're still working on surviving out here but it won't always be that way. I could live long enough to see that. Hell, there are still a few OG around, although I've never met them. They're all out in the Ice Giants.

We're home half a dec before the first Okeke-Hightower impact, which sounds like plenty of time but it's close enough to make me nervous. Distances out here aren't safe, even in the best top-of-the-line JovOp can. I hate being in a can anyway. If anyone ever develops a jellie for long-distance travel, I'll be their best friend forever. But even in the can, we had to hit three oases going and coming to refuel. Filing a flight plan guaranteed us a berth at each one but only if we were on time. And there's all kinds of shit that could have made us late. If a berth was available we'd still get it. But if there wasn't, we'd have to wait and hope we didn't run out of stuff to breathe.

Bait worked the plan out far enough ahead to give us generous ETA windows. But you know how it is—just when you need everything to work the way it's supposed to, anything that hasn't gone wrong lately suddenly decides to make up for lost time. I was nervous all the way out, all through the job, and all the way back. The last night on the way back I dreamed that just as we were about to reenter JovOp space, Io exploded

and took out everything in half a radian. While we were trying to figure out what to do, something knocked us into a bad spiral that was gonna end dead center in Big Pink. I woke up with Aunt Chovie and Splat peeling me off the wall—so embarrassing. After that, all I wanted to do was go home, slip into a jellie, and watch Okeke-Hightower meet Big J.

By this time, the comet's actually in pieces. The local networks are all comet news, all the time, like there's nothing else in the solar system or even the universe for that matter. The experts are saying it's following the same path as the old Shoemaker-Levy and there's a lot of chatter about what that means. There are those who don't think it's a coincidence and Okeke-Hightower is actually some kind of message from an intelligence out in the Oort cloud or even beyond, and instead of letting it crash into Big J, we ought to try catching it, or at least parts of it.

Yeah, that could happen. JovOp put out a blanket no-fly—jellies only, no cans. Sheerluck suggests JovOp's got a secret mission to grab some fragments but that's ridiculous. I mean, aside from the fact that any can capable of doing that would be plainly visible, the comet's been sailing around in pieces for over half a dozen square decs. There were easier places in the trajectory to get a piece but all the experts agreed the scans showed nothing in it worth the fortune it would cost to mount that kind of mission. Funny how so many people forgot about that; suddenly, they're all shoulda-woulda-coulda, like non-buyer's remorse. But don't get me started on politics.

I leave a message for Dove saying we're back and getting ready to watch the show. What comes back is an auto-reply saying she's out of the office, reply soonest. Maybe she's busy with Fry, who probably has comet fever like everyone else but maybe even more so, since this will be like the big moment that kicks off her new life. If she's not out of the hospital, I hope they've got a screen worthy of the event.

We all want to see it with our naked eyes. Well, our naked eyes and telescopes. Glynis is bringing a screen for anyone who wants a really close-up look. Considering the whole thing's gonna last about an hour start to finish, maybe that's not such a bad idea. It could save us some eyestrain.

When the first fragment hits, I find myself thinking about the sensors that fell into the atmosphere. They've got to be long gone by now and even if they're not, there's no way we could pick up any data. It would all be just noise.

Halfway through the impacts, the government overrides all the communication for a recorded, no-reply announcement: martial law's been declared, everybody go home. Anyone who doesn't is dust.

This means we miss the last few hits, which pisses us off even though we all agree it's not a sight worth dying for. But when we get home and can't even get an instant replay, we start wondering. Then we start ranting. The government's gonna have a lot of explaining to do and the next election ain't gonna be a lovefest and when did JovOp turn into a government lackey. There's nothing on the news—and I mean, *nothing*, it's all reruns. Like this is actually two J-days ago and what just happened never happened.

"Okay," says Fred, "what's on OuterComm?"

"You want to watch soap operas?" Dubonnet fumes. "Sure, why not?"

We're looking at the menu when something new appears: it's called the Soledad y Gottmundsdottir Farewell Special. The name has me thinking we're about to see Fry in her old two-stepper incarnation but what comes up on the screen is a chambered Nautilus.

"Hi, everybody. How do you like the new me?" Fry says.

"What, is she going to law school?" Aunt Chovie says, shocked.

"I'm sorry to leave you a canned goodbye because you've all been so great," Fry goes on and I have to knot my arms together to keep from turning the thing off. This doesn't sound like it's gonna end well. "I knew even before I came out here that I'd be going out for sushi. I just couldn't decide what kind. You guys had me thinking seriously about octo—it's a pretty great life and everything you do matters. Future generations—well, it's going to be amazing out here. Life that adapted to space. Who knows, maybe someday Jovian citizens will change bodies like two-steppers change their clothes. It could happen.

"But like a lot of two-steppers, I'm impatient. I know, I'm not a two-stepper anymore and I've got a far longer life span now so I don't have to be impatient. But I am. I wanted to be part of something that's taking the next step—the next *big* step—right now. I really believe the Jupiter Colony is what I've been looking for."

"The Jupiter Colony? They're cranks! They're suicidal!" Glynis hits the ceiling, banks off a wall, and comes down again.

Fry unfurls her tentacles and lets them wave around freely. "Calm down, whoever's yelling," she says, sounding amused. "I made contact with them just before I crewed up with you. I knew what they were planning. They wouldn't tell me when, but it wasn't hard to figure out that the Okeke-Hightower impact was the perfect opportunity. We've collected some jellies, muted them, and put in yak-yak loops. I don't know how the next part works, how we're going to hitch a ride with the comet—I'm not an astrophysicist. But if it works, we'll seed the clouds with ourselves.

“We’re all chambered Nautiluses on this trip. It’s the best form for packing a lot of data. But we’ve made one small change: we’re linked together, shell-to-shell, so we all have access to each other’s data. Not too private but we aren’t going into exile as separate hermits. There should still be some sensors bobbing around in the upper levels—the Colony’s had allies tossing various things in on the sly. We can use whatever’s there to build a cloud-borne colony.

“We don’t know for sure it’ll work. Maybe we’ll all get gravitated to smithereens. But if we can fly long enough for the jellies to convert to parasails—the engineers figured that out, don’t ask me—we might figure out not only how to survive but thrive.

“Unfortunately, I won’t be able to let you know. Not until we get around the interference problem. I don’t know much about that, either, but if I last long enough, I’ll learn.

“Dove says right now, you’re all Down Under on loan to OuterComm. I’m going to send this message so it bounces around the Ice Giants for a while before it gets to you and with any luck, you’ll find it not too long after we enter the atmosphere. I hope none of you are too mad at me. Or at least that you don’t stay mad at me. It’s not entirely impossible that we’ll meet again some day. If we do, I’d like it to be as friends.

“Especially if the Jovian independence movement gets—” she laughs. “I was about to say, ‘gets off the ground.’ If the Jovian independence movement ever achieves a stable orbit—or something. I think it’s a really good idea. Anyway, goodbye for now.

“Oh, and Arkae?” Her tentacles undulate wildly. “I had no idea wormy would feel so good.”

We just got that one play before the JCC blacked it out. The feds took us all in for questioning. Not surprising. But it wasn’t just Big J feds—Dirt feds suddenly popped up out of nowhere, some of them in-person and some of them long-distance via comm units clamped to mobies. The latter is a big waste unless there’s some benefit to having a conversation as slowly as possible. Because even a fed on Mars can’t do anything about the speed of light—it’s still gonna be at least an hour between the question and the answer, usually more.

The Dirt feds who were actually here were all working undercover, keeping an eye on things, and reporting whatever they heard or saw to HQ back in the Dirt. This didn’t go down so well with most of us out here, even two-steppers. It became a real governmental crisis, mainly because no one in charge could get their stories straight. Some were denying any knowledge of Dirt spies, some were trying to spin it so it

was all for our benefit, so we wouldn't lose any rights—don't ask me which ones, they didn't say. Conspiracy theories blossomed faster than anyone could keep track.

Finally, the ruling council resigned; the acting council replacing them till the next election are almost all sushi. That's a first.

It's still another dec and a half till the election. JovOp usually backs two-steppers but there are noticeably fewer political ads for bipeds this time around. I think even they can see the points on the trajectory.

A lot of sushi are already celebrating, talking about the changing face of government in the Jovian system. I'm not quite ready to party. I'm actually a little bit worried about us. We were born to be sushi but we weren't born sushi. We all started out as two-steppers and while we may have shed binary thinking, that doesn't mean we're completely enlightened. There's already some talk about how most of the candidates are chambered Nautiluses and there ought to be more octos or puffers or crabs. I don't like the sound of that but it's too late to make a break for the Colony now. Not that I would. Even if Fry and all her fellow colonists are surviving and thriving, I'm not ready to give up the life I have for a whole new world. We'll just have to see what happens.

Hey, I told you not to get me started on politics.

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ABOUT THE AUTHOR

Pat Cadigan was born in Schenectady, New York, and now lives in London with her family. She made her first professional sale in 1980, and has subsequently come to be regarded as one of the best new writers of her generation. Her story "Pretty Boy Crossover" has appeared on several critic's lists as among the best science fiction stories of the 1980's, and her story "Angel" was a finalist for the Hugo Award, the Nebula Award, and the World Fantasy Award (one of the few stories ever to earn that rather unusual distinction). Her short fiction—which has appeared in most of the major markets, including *Asimov's Science Fiction* and *The Magazine of Fantasy & Science Fiction*—has been gathered in the collections *Patterns* and *Dirty Work*. Her first novel, *Mindplayers*, was released in 1987 to excellent critical response, and her second novel, *Synners*, released in 1991, won the Arthur C. Clarke Award as the year's best science-fiction novel, as did her third novel, *Fools*, making her the only writer ever to win the Clarke Award twice. Her other books include the novels *Dervish Is Digital*, *Tea from an Empty Cup*, and *Reality Used to Be a Friend of Mine*, and, as editor, the anthology *The Ultimate Cyberpunk*, as well as two making-of movie books and four media tie-in novels.

The Undiscovered Country: Planets of Dead Stars

JULIE NOVAKOVA

The solar system is dying. It's happening slowly, but inevitably. In approximately six billion years, the Sun will become a red giant: a bloated star burning up hydrogen in its outer shell. It will have engulfed Mercury and Venus and, possibly, Earth. While our beloved planet may survive the event, it would do so as a scorched rock, uninhabitable long before that celestial event because of the increasing luminosity of the Sun and temperatures on the planet. Is it the end of habitability in our solar system? Not quite.

Some icy moons and possibly even faraway dwarf planets possess water oceans hidden beneath their icy crusts. During the red giant stage, some of the moons of Jupiter and Saturn may transition to open water oceans under a vapor atmosphere, but it may be a short-lived state, since they could quickly lose their water to space. If we're being optimistic, the new habitable zone wouldn't stay around the orbits of the giants for longer than a few hundred million years, and it would eventually reach beyond the Kuiper Belt and melt its numerous icy worlds.

As the hydrogen in the shell runs out, the dying star ignites helium in its core, and its luminosity decreases for some time, moving the habitable zone back to the giant planets and their moons. But this source of energy won't last long as there would then be a few brief flashes as the helium in the star's outer shell ignites. The result could feature the Sun at its brightest, increasing its luminosity a thousandfold but only for years to maximum hundreds of years each time. What a sight it would be—but best observed from a very large distance. Earth, if it has survived, has moved to a more outward orbit and become a hot

barren rock. By now, the habitable zone has once again shifted to the Kuiper Belt and further, enabling Pluto, Eris, Sedna, and many other water- and organics-rich dwarf planets to bask in balmy temperatures for mere millions of years.

Planets in systems of lower-mass stars may be luckier. Imagine a large moon of an exo-Jupiter around a less massive star that still undergoes the red giant phase. It may remain in the new, “post-main sequence” habitable zone for nearly six billion years, more than enough time for life to develop and thrive. Low-mass red giants may actually be very good places to look for life-bearing planets.

But back to the Sun: When all the remaining nuclear fuel is gone, the old star sheds its outer envelope and creates a short-lived but beautiful planetary nebula. What remains of the Sun is a searing-hot but tiny stellar remnant: a white dwarf (WD). Its initial temperature might reach hundreds of thousand Kelvin (decreasing fast at the outset), and its size is just slightly larger than the Earth. It would be surrounded by scorched rocky bodies and somewhat bedraggled distant gas and ice giants with their now volatile-poor moons, and a faraway belt and cloud of comets and the occasional dwarf planets. As it cools to reach the temperature of the cosmic background and becomes a black dwarf in some trillions of years, there is nothing interesting happening around. Or is there?

Many white dwarfs have polluted atmospheres. Instead of just helium, hydrogen, and other elements we could expect there, we see spectral lines of much heavier elements on their surfaces. It means that there is relatively fresh infall of material onto the star, because heavier components tend to sink deeper into the star remnant quite fast.

What can be the source of the material? Asteroids, planetoids? Some orbits could become destabilized, resulting in a crash of the object with the star. In 2015, a disintegrating planetesimal was discovered transiting in front of its host star, WD 1145+017. The star also harbors a dust disk. Insofar, almost twenty elements were discovered in various WD atmospheres, which can give us insights into the composition of their planetary systems. In theory, it could even suggest whether the destroyed planet had plate tectonics, and there is an off-chance of observing traces of long-lost life.

But do these systems need be destabilized indefinitely? Certainly not. There is no reason to presume that WDs in principle couldn't host planets on stable orbits. And if they do—could some of these worlds harbor life?

Life Under the Tiny White Sun

We've already established that white dwarfs are extremely small and hot (at least initially; they cool to a few tens of thousand Kelvin—still a magnitude hotter than the Sun—quickly, and then cool slower). How could such a star host a habitable planet or habitable on the surface, if we for now discount objects harboring oceans under ice?

Astronomer Eric Agol suggested the existence of a WD habitable zone stable over several billion years in his 2011 paper. White dwarfs that have cooled to temperatures of a few thousand Kelvin would radiate “just right” to keep an Earth-like planet on a close-in orbit habitable for three or more billion years, until they've cooled too much. Since the planets need to be extremely close to the star to receive enough heat (but not *too* close to be shattered by tidal forces), their transits in front of the star should be well-observable. What sights could we see *from* such a planet? It would almost certainly be a tidally locked world, one side bathed in perpetual light and the other drowning in eternal night. From the dayside, the relative size of the star would appear similar to our Sun—it would be much closer, but its absolute size would be like that of the Earth. The light spectrum should allow for photosynthesis and shouldn't be harmful for organic molecules.

In 2013, Abraham Loeb and Dan Maoz argued that biosignature detection—observing chemical traces associated with life in a planet's atmosphere—would be easier for WD planets, since due to the negligible size difference, the contrast between the absorption lines in the atmosphere and the background stellar light would be much higher than for planets of main-sequence stars. They simulated a spectrum that could be observed by the James Webb Space Telescope, now slated to be launched in Spring 2019 unless further delays occur. But we need to know more cool WDs in our stellar neighborhood. There is a chance they may be identified in ESA's star-charting Gaia mission results. The second batch of its data will be released in late April. Afterwards, if new exoplanet hunters such as NASA's TESS, ESA's CHEOPS, or ground-based telescopes discover any WD planets, we might soon learn about their atmospheric composition and chances for life.

But there is a slight problem. First, if we presume first-generation and not newly formed planets, they may be in a not-so-habitable state even if volatiles are delivered there by comets and asteroids. Second, as the white dwarf cools, the habitable zone shifts closer to the star—the other way then around main-sequence stars like our Sun. If a planet is initially too close, it may lose its atmosphere and water to the heat and

radiation, or become a greenhouse hell like Venus and only then enter the habitable zone without actual habitable conditions. Moreover, tidal heating may greatly increase the likelihood of this pessimistic scenario, or transform the planets into volcanic wastelands. Other planets may start in the habitable zone, perhaps with everything to be conducive for life, but then become frozen balls, unless geochemical processes or life—if present—produce increasingly more greenhouse gases. Finally, could induction heating triggered by WDs' often powerful magnetic fields prevent close-in planets from being habitable?

However, the whole picture is more complex. Retention of volatiles such as water or atmospheric components depends on many factors such as the planet's mass and magnetic field, and the path to becoming like Venus is more complicated than just too much sunlight, tides, and greenhouse gases. Being slightly too close to the star may not result in the planet becoming an airless barren rock or an exo-Venus, at least unless its orbital eccentricity is high enough to result in more substantial tidal heating.

As to being slightly too far, it may not be a problem with the right greenhouse gases. The traditional definition of the habitable zone considers carbon dioxide and water vapor, but not other ones such as molecular hydrogen, which makes a very efficient shield against losing heat. A massive planet might also have more inner sources of heat than Earth—more radiogenic heating if it's composed of more radioactive elements. But it's a question whether a thick-enough hydrogen atmosphere would survive the red giant phase (probably not, unless the planet was *really* far away, in which case we can ignore that it orbits the white dwarf at all).

So far, we don't know the answers, but thanks to currently running and planned surveys, we might soon. After all, it's our future too. But now it's time to move to planets of even more extraordinary remnants of stars.

From Supernovae to Pulsars and Black Holes

Indeed, there are more extreme worlds in the universe. In fact, they were the first ever confirmed exoplanets. In 1991, astronomers Alex Wolszczan and Dale Frail detected a peculiar pattern in the radio pulses coming from a relatively nearby pulsar B1257+12 (note: for a pulsar, *nearby* can mean over 2000 lightyears far away). Pulsars are a class of neutron stars: very compact remnants of stars that used to be many times more massive than our Sun. They measure just around ten miles

across and still weigh more than the Sun. Pulsars are rapidly rotating neutron stars emitting powerful radio pulses. These are very regular and make pulsars accurate cosmic clocks. So when some become inaccurate, scientists search for the source of these glitches.

They can be caused by another object gravitationally tugging at the pulsar, making it wobble around their common center of mass. Although the wobble is tiny, we can detect it through timing of the pulses. This is the way that the first exoplanets were found. The original batch of data indicated the presence of two planets around the pulsar B1257+12, one orbiting 0.19 astronomical units (Sun-Earth distances) from the pulsar and approximately twice the mass of our Moon, the other about 0.36 au away and almost four times as massive as the Earth. Later data also revealed a third planet 0.46 au away and slightly more massive than the second one.

Other searches found more planets around pulsars, each completely different in terms of mass and orbit. How did they form? Did they survive the supernova explosion that gave birth to the pulsar, form from the fallback material from the explosion, or from an accretion disk powered by the pulsar devouring a companion star? Could they be captured rogue planets? Or did they form from a disk of interstellar medium enshrouding the tiny neutron star? Since each of the known system is very different from the others, each may have had a different formation scenario!

Could these worlds, orbiting diminutive stellar remnants that emit not just powerful radio pulses, but also strong magnetic fields, X-rays and an intense wind of charged particles, have any chance of harboring life? Despite the extremity of the environment, some works indicate that if massive terrestrial planets had their own magnetic field, they could be shielded from most of the harmful effects and retain a dense enough atmosphere, thus potentially habitable conditions.

But there are too many open questions about pulsar planets. Each formation scenario would lead to a very different planetary composition and structure, which in turn influences the presence (or absence) and character of the intrinsic magnetic field, atmospheric composition, response to the pulsar's magnetic field and tidal forces, and so on. So even with the same distance from the star and planetary mass, we could end up with wildly varying worlds.

Unfortunately, they will likely remain elusive for a while. They are too few and too far away to warrant observations aimed at their direct detection, and they would have to produce very—some would say unrealistically—strong signatures, such as thermal emissions

or ultraviolet/optical auroral effects, in order for us to observe and characterize them. So far, they remain the stuff of speculation—ideal grounds for science fiction writers, aren't they?

And we still haven't got to an even wilder, so far purely hypothetical possibility—that planets may orbit black holes. In theory, rotating charged black holes may host stable orbits *beneath* their event horizon. It's difficult to wrap one's head around the concept of a planet unseen by the rest of the universe, with skies lit up by eternally circulating photons, with possibly some causality-breaking events on the daily menu. It's all *very* hypothetical, and essentially impossible to test. A planet above the event horizon may seem less unimaginable to us. *Interstellar*, anyone? A recent paper focused on the question of whether such objects may receive enough energy to host life, and in short, yes, they *might*, but in the specific case of the conditions described in the movie *Interstellar*, they would become UV-cooked molten balls. Such worlds will likely remain the domain of science fiction for a very long time.

Off to the End of Time

Perhaps it's surprising that such extreme worlds have been utilized in science fiction *so little*. We may mention Robert L. Forward's novel *Dragon's Egg*, which features a beautiful vision of life on a neutron star, but not a planet of such a remnant. Baxter's *Flux* is similar in this respect. Niven's *The Integral Trees* and *The Smoke Ring* perhaps come closest to the concept. Additionally, a 1995 TV movie *White Dwarf* is set on, expectedly, a WD planet—but doesn't seem to use the setting in a meaningful way. However, there may be more of short fiction (such as "One Face," by Niven again) that deals with these subjects. And if not so much . . . perhaps someone was just inspired. After all, these extraordinary worlds tell stories.

They tell us a more complex story of the universe than we've expected just decades or even years ago. They show that planets can survive or form under unexpected conditions, and at least one is in an extremely old system and may be evidence of planetary formation just a billion years after the Big Bang. They might even increase the chances for life in the universe when it's much older than ours. Stellar remnants will stay long after star formation will have ceased, cooling slowly for trillions of years. What happens then?

They won't remain these cooling embers forever. Eventually, their destiny will depend on the rate of expansion of the universe, and the

proton decay. Does it occur, and if so, on what timescale? The ultimate fate of our universe hinges on the answers. Will all matter eventually crumble down to subatomic particles, which will evaporate into bits of energy in a universe as homogeneous as it gets, expanding into virtual nothingness? If this notion seems cold and cruel to you, fear not; even if this particular scenario is correct, it's still countless trillions (of trillions, etc.) years ahead, more unimaginable than the comparatively meager timescales under which the planets of dead stars may or may not remain habitable.

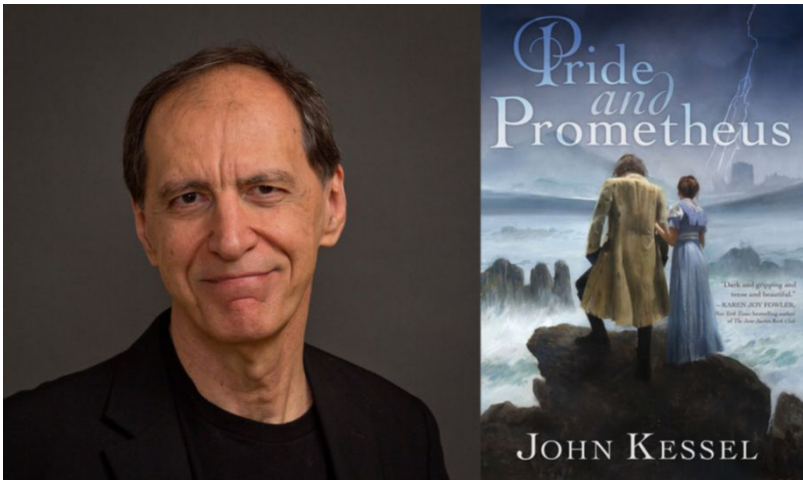
Plenty of time to explore the universe that we have and find out, isn't it?

ABOUT THE AUTHOR

Julie Novakova is a Czech author and translator of science fiction, fantasy and detective stories. She has published short fiction in *Clarkesworld*, *Asimov's*, *Analog*, and other magazines and anthologies, and her translations of other authors' work appeared in *Tor.com*, *Strange Horizons*, and *F&SF*. Her work in Czech includes seven novels, one anthology (*Terra Nullius*), and over thirty short stories and novelettes. Some of her works have been also translated into Chinese, Romanian, Estonian, German and Filipino. She received the Encouragement Award of the European science fiction and fantasy society in 2013, the Aeronutilus award for the best Czech short story of 2014 and 2015, and for the best novel of 2015. Julie is an evolutionary biologist by study and also takes a keen interest in planetary science.

Classics, Companionship, and a Creature: A Conversation with John Kessel

CHRIS URIE



Classics are classics for a reason. Whether they're the first of their kind or they redefine a genre, they've earned their place in the common consciousness as paragons of literature. They've been dissected, analyzed, and pored over for years by curious minds itching to find something undiscovered within their texts. But it's rare to find an author daring enough to wrestle and remix a pair of classics.

John Kessel did just this with his novelette "Pride and Prometheus" which won a Nebula Award and the Shirley Jackson Award. Now, he's expanded that novelette into a complete novel, further illuminating what happens when Jane Austen's Bennet family encounter Mary Shelly's

Doctor Frankenstein. *Pride and Prometheus* not only amalgamates two works of classic literature, but by doing so with respect to the source material, casts fresh eyes on the original works. When Doctor Frankenstein leaves Switzerland bound for Scotland to create a wife for the Creature, he happens upon Mary Bennet. From there, their lives become intertwined with each other and that of Frankenstein's creation.

John Kessel is the author and editor of numerous books and stories. He has won the Nebula, Shirley Jackson, Theodore Sturgeon, and James Tiptree Jr. Awards. His newest novel *Pride and Prometheus* is available from Saga Press on February 13th.

What made you choose *Pride and Prejudice* to mash together with *Frankenstein*? Did you find thematic parallels?

It started when I was thinking about how these two books came out within a couple of years of one another, yet could not seem more different. Austen and Shelley are on the surface very different writers. Austen's work is the precursor to the novel of manners, stories of domestic realism with satirical elements, writers like Henry James and Virginia Woolf. *Frankenstein* is a gothic about science; Brian Aldiss called it the first science fiction novel. It has huge influence in science fiction, horror, and fantasy.

Then I noticed that, in *Frankenstein*, Victor and his friend Henry pass through the town of Matlock in England on their way to Scotland, where Victor intends to create a bride for his monster, who is blackmailing him by threatening to kill anyone Victor loves if he does not create a companion for him. And in *Pride and Prejudice*, Darcy's estate, Pemberley, is near Matlock. So, I thought it might be possible, with a little finagling, for Victor to meet some of the characters from *Pride and Prejudice*.

Thematically, I thought about how Austen's novels are all about how difficult it is to find the proper mate, and in *Frankenstein* the Creature has his own troubles finding his romantic match. Once I fixed on the character of Mary Bennet, the awkward, sententious middle Bennet sister as my heroine, the story grew in unexpected directions. By putting an Austen character into a gothic novel, I can comment on both the novel of manners and the gothic (and by implication, science fiction). As a science fiction writer who has studied canonical literature his entire life, this struck right at the heart of many contradictory feelings I've had about the relationship of genre fiction to literary fiction.

Besides Jane Austen and Mary Shelley, who was one writer that also influenced this story? *Pride and Prometheus* first saw the light of day as a novelette. What were some of the challenges of expanding that into this book?

I think that Karen Joy Fowler was in the back of my mind as I wrote this, for the way in *The Jane Austen Book Club* she played games with Austen's situations and characters, but fundamentally respected Austen and tried to do her justice. I was not interested in writing a parody. I suppose another book that was in my mind as I expanded the novelette into a novel was *Pride and Prejudice and Zombies*—which came out after I had already written my novelette 2007. That was sort of an anti-influence; I do not think that book engages seriously with what Austen is about or with her characters. I did not want *Pride and Prometheus* to simply be a stunt. I wanted it to treat both Austen and Shelley with respect.

Karen suggested back in 2008 that I expand the story into a novel, but at that time I did not think I had a novel's worth of story in me. But years later I came to think about it more, and I realized that my novelette version was really the middle of a much longer story. So, the novel begins earlier than the novelette, and goes past the end of that story. It also gives not just Mary Bennet's viewpoint, but the viewpoints of Victor Frankenstein and his Creature. That produced some lovely plot developments, dramatic ironies, places where the characters deceive each other, and give different visions of the same action. I find that stuff fascinating.

Once I got into it I was carried along by the situations, and also by the fact that I did not want my story to depart from the plot of *Frankenstein*, but to fit within the spaces of Shelley's narrative where things happen that she did not tell us about. It's sort of a secret history of *Frankenstein*, a "story behind the story."

***Frankenstein* is known as one of the classic horror novels, but while reading *Pride and Prometheus*, I was touched by some of the horrific elements in the Bennet sister's lives. Do you think regency novels of the period also have their own kind of societal/psychological horror about them?**

I love the humor in Jane Austen's novels, but yes, there is a deadly serious deconstruction of British manners and morals going on in her best work. The way in which so much of a person's fate is tied to marrying

the right person—this was the most important choice of a woman's life, if she even got any choice in the matter. And the problems that arise when people of different temperaments somehow decide they need to be together. And the sex that is not on the surface but that boils just below. There's a horror of limited choices and restricted freedom in a society that sometimes seems like a brutal machine. I don't know if Kafka ever read Jane Austen, but I could see him enjoying her work.

Pride and Prometheus is written from multiple perspectives. Which character was the most challenging to write and which character came most naturally?

I loved writing all of the characters, getting deeply into who they are, trying to make them consistent with Austen's and Shelley's characters, but also having to develop them in ways that neither of those authors would. I'd say that Victor was the hardest for me to write because I do not sympathize with him as much as I do with Mary and the Creature. So, I had to work to give him his due, to understand his motives for doing things that I would rather he not have done. I'm not crazy about his life choices.

Mary was hard. Because she is the main character, I needed to make her plausibly the same character as the Mary in *Pride and Prejudice*, but evolved to something more three dimensional, mature, and sympathetic than Austen presents in her Mary. There's not a lot about Mary in *Pride and Prejudice*, but what we see is not attractive. Austen's Mary is clueless and insufferable. And pitiable. And the butt of jokes. She's so wrapped up in her music and moralizing that she cannot see other people clearly, yet she prides herself on the wisdom that she's copied down from books of sermons. And she's a music geek who doesn't realize she is not a good performer. I could relate to Mary, since the teenaged John Kessel was similarly clueless—not that I can claim any great wisdom now! She could easily have been a science fiction fan if science fiction were around. Instead, in the thirteen years between the end of *Pride and Prejudice* and the start of my novel, I have her develop an interest in fossils and natural philosophy. But she's still just as bookish a woman as she was a girl. I suppose some readers who know Austen may take issue with my presentation of Mary, but I tried to make her as believable as I could. I really admire my Mary, though I think she is still pretty clueless in fundamental ways. But that very cluelessness I wanted to turn into something of a virtue.

The Creature was very interesting to write. He's the ultimate outsider,

feared and rejected by any who see him. His very strangeness was something I tried hard to understand. In my version, he is not stitched together from old corpses. He's not ugly: if he were a statue you might even call him handsome. The problem is he's not a statue, he's alive. He looks human, but not convincingly enough—it's the uncanny valley problem. His every motion is deeply disturbing to anybody who sees him; he's fundamentally monstrous even when—maybe especially when—he is doing very ordinary things. There's something horrifyingly *wrong* about him.

I had fun trying to figure out how he managed to follow Victor from Geneva, Switzerland all the way to England and Scotland without any resources or assistance while also looking like a monster.

And his deep loneliness, his alienation from human beings, is tragic and fascinating. It was interesting to try to see the world through his eyes. He doesn't understand a lot of things. He's only three years old.

*If you were a character from either **Pride and Prejudice** or **Frankenstein**, who would you be?*

Realistically, if I were in either book, I would probably be Victor's father, trying to figure out my troubled son and get him to have the decent, happy life that he ought to have. But as I said above, I can identify with all three main characters. Mary is probably the most like me, though I have—haven't we all?—felt like the Creature sometimes.

As an editor, what do you find are some of the challenges unique to putting together an anthology or collection? Having collaborated extensively with James Patrick Kelly, can you shed some light on the way you two work together when crafting an anthology?

There are a lot of moving parts to creating a good themed anthology. You have certain practical limitations: how large is your budget for buying stories? How long can the book be? What to do if a story you want is not available, or if the rights holder wants more than you can pay? What about gender balance or diversity of the contributors?

Working with Jim is great. On the simplest level, with two editors there can be a division of labor. But I really like the give-and-take of working with him. He is very smart and well-read and has lots of ideas and enthusiasms, likes and dislikes. So do I. We do not always agree. Usually we have a theme for the book and a rough sense of what sorts

of things ought to be in it. But with, for example, *Feeling Very Strange: The Slipstream Anthology*, we had to come to some understanding of what we thought might be included under the title “slipstream.” Each anthology we did is a sort of exploration, a question more than an answer. We have been told by some reviewers that we do not know what we are talking about. Quite likely.

Wrestling out the contents list and writing an introduction can be a very educational process. I’m not sure if we will be editing any other books soon, but I did enjoy working with him on that series of books for Jacob Wiseman and Tachyon.

You’ve also worked as a science fiction and fantasy critic. What role do you think a critic plays in the landscape of publishing?

I haven’t written much criticism for years, though I have lots of opinions. I’m more of a critic than a reviewer. Reviewers can have some effect on what gets published and what gets read, and that’s a big responsibility. Critics like me are more like football fans talking about the game once it is over and trying to figure out what happened and why it happened the way it did. For me, it’s a way to explaining why I like (or dislike) something. I prefer to talk about things I like and bring them to other people’s attention—a particular kind of story or story values.

What other projects do you have in the works?

I’m between long projects right now. I have been working off and on with a story, a kind of historical fantasy, about the assassination of William McKinley at the Pan American Exposition in Buffalo in 1901 by a Polish anarchist named Leon Czolgosz. I grew up in Buffalo, and my father was a Polish immigrant who came over as a child in 1913. They had a ride there at the exposition, “A Trip to the Moon” that was the first “Dark Ride” amusement ever done, the ancestor to all the rides at Universal City and Disney World. I have Leon visit the moon on the day that he is to shoot the president. But I still have a lot to work out, so it’s a long way from being done.

Since you’ve created the Sycamore Hill Writer’s Workshop and have also taught numerous writing and literature courses as a professor, what is the one piece of advice you like to give your students?

Well, I don't know if this is appropriate for a family magazine, but the best piece of writing advice I have ever heard came to me from Gwenda Bond by way of Kelly Link: "Quit dicking around." You'd think that would be a lot easier to do than it is.

ABOUT THE AUTHOR

Chris Urie is a writer and editor from Ocean City, NJ. He has written and published everything from city food guide articles to critical essays on video game level design. He currently lives in Philadelphia with an ever expanding collection of books and a small black rabbit that has an attitude problem.

Another Word: A Brief Parable about Exchanges Between Time, Independence, Technology, and Privacy

FRAN WILDE

Economies of time, independence, technology, and privacy intersect in many places, especially in this mostly shiny now-future we programmed for ourselves. For me, one intersection is primarily in my refrigerator. Another's in how I get where I want to go.

As a person with mobility and weight-bearing concerns, what I'm somewhat reluctantly giving up in privacy is increasingly leveraged by what I'm gaining in (ironically), independence.

Groceries first. Right now, I'm restricted from carrying grocery bags and baskets because of a recurring injury. But I own a phone with a program on it (Instacart) that allows me to order milk and eggs and bread, then have them brought to my house. This app gives me independence that would otherwise mean I had to wait until someone could accompany me to the store, or go themselves, to help carry things.

The functionality isn't new (and the apps are a couple years old too). There's a website in Baltimore that's been operating for years (called Baltimarket) that allows Baltimore residents in locations without grocery stores, as well as the elderly, to order groceries and pick them up closer to home, without delivery fees. For a long time, my local co-op would deliver food orders to residents who couldn't come and pick up their food, which is a similar option, minus the app.

What the addition of a phone-based program does is allow faster reordering, which saves a lot of time. It means also that I can track what's

unavailable or exchanged, and keep some substitutions from being made (a huge improvement over delivery services from previous decades).

The app doesn't necessarily save money, and that's a different, larger, problem. And my purchases go into a database. More on that in a moment.

Transportation next. We're not in a future with flying cars, yet, but I use airline and travel apps to book flights, store my tickets, and see when the next local bus is coming. These save me time waiting in the cold, or trying to hold onto multiple pieces of paper while I'm traveling. The Lyft app too—as well as a new program called Curb—offers even more independence. (I've been waiting for the taxi cab version of ride hailing and Curb seems to be it.) For a lot of people with mobility limitations, Lyft and other ride-hailing apps become a means of getting around with less stress, without worrying whether a metro stop will have a broken escalator or elevator, or whether a taxi won't appear in time to make an appointment. Additionally, apps allow for payment on a stored card, so time is saved and a record of the transaction is sent, without more paper to sign and carry. (Sound of more data going into a database.) Meantime, while the cost of this independence is high, it's also more predictable—cabs used to be mysterious about costs until the end of the ride.

In 1983, when Steve Jobs gave a talk at the International Design Conference in Aspen, Colorado (in a speech nicknamed the “lost” speech), he spoke of a time when computer software wouldn't be bought at brick-and-mortar stores but would be downloaded over phone lines, onto computers we would carry around. It sounds like Jobs was anticipating app culture decades before the App Store first launched in 2008.

Yet, even Jobs couldn't fully predict how apps would permeate culture, or how they'd be used. Thirty five years after the Aspen speech, I love these apps that save me time. That let me be in the world on my own terms.

But.

Modern app culture also drives data mining to a new high. And it sinks to a new low for reducing access to those who might need it most. There are food deserts, as I mentioned above. There are absolutely technology deserts as well.

And more than that, there's a long accumulation of data—what is bought, where, and when—that apps feed on. Many apps talk to each other, some, when you log on to them through another app, want to help you even more, by “creating a better experience” i.e.: pointing the

advertising that's most likely to sway you right at your eyeballs. Each time I order products or book a trip, I'm adding to that data about me. The same is true of any shopping experience these days, but apps make linking up the data extremely easy.

That's because apps are designed to be helpful and their designers want those apps to be even more helpful than they are. They can try to predict your needs, but all they've really got to go on are your prior actions. They're trying to get smarter, to give you the best experience so that you keep using them. All they desire is more data.

That act of creating a better experience can fold into more than just advertising. Predictive apps can give you information based on time of day. Or remind you to stand up or drink water if you haven't in a while. There's a recent *Wired* article about China's experiments with social credit that details how renting a car or using a product can hinge on your numbers. It's easy from there for, say, an SF author with a fertile imagination and a vast need to procrastinate from the short story they're writing about time (hypothetically), to think about the groceries they ordered that morning, or the number of times they've taken a Lyft or a cab to a particular restaurant lately. Could the purchase of some products over others become ways to commodify or enhance social ranking, just like early toothpaste and deodorant commercials once promised?

Or could it lead to other things, including expanded barriers to who can and can't access app-driven society—something we've seen already in the restriction of free WiFi and computer access in impoverished urban neighborhoods—this time expanded to access based on social connections, even political actions.

App culture—a version of it—plays out in various dystopias, including M. T. Anderson's 2002 dystopian YA novel, *Feed*. And the ability to use the system, or not, impacts characters' ability to perceive the system . . . even as it becomes a self-perpetuating ecosystem.

Apps inform us, distract us, and for some of us, including members of the disabled community, provide a greater level of independence (hypothetically) than previous desktop-bound Internet services, and especially more than brick-and-mortar culture.

Moving away from them gets very hard. When you disable your Facebook account, a wall of friends' images appears, with [theirname] will be sorry not to see your updates, [yourname]. (Dear Facebook programmers, this had an uncanny valley run-screaming effect on me, FYI). And writing letters one-to-one takes more time than broadcasting your status one-to-many, but the interaction can sometimes be so much more valuable.

But grocery shopping? Calling a cab? Those actions don't yet feel like social transactions as much as time-saving and energy-saving tools. *So far*. What I'm willing to give up is outweighed by what I feel that I'm gaining from this type of technology.

I still think about the ramifications a lot, in this now-future where I use a handheld robot to restock my kitchen. Sure, we don't have flying cars yet, but when I put the milk away, without having to wait for family to help me carry the bag from the store, I'm warily grateful for the independence and the access. Plus, science fiction writer me now has more things to chew on.

ABOUT THE AUTHOR

Fran Wilde's novels and short stories have been nominated for two Nebula awards and a Hugo, and include her Andre Norton- and Compton-Crook-winning debut novel, *Updraft* (Tor 2015), its sequels, *Cloudbound* (2016) and *Horizon* (2017), and the novelette "The Jewel and Her Lapidary" (Tor.com Publishing 2016). Her short stories appear in *Asimov's*, *Tor.com*, *Beneath Ceaseless Skies*, *Shimmer*, *Nature*, and the 2017 Year's Best Dark Fantasy and Horror. She writes for publications including *The Washington Post*, *Tor.com*, *Clarkesworld*, *iO9.com*, and *GeekMom.com*.

Editor's Desk: The Return of the Reader's Poll

NEIL CLARKE

It's time to pick your favorite *Clarkesworld* story and cover art from 2017 in our reader's poll. This year, we're doing it a bit differently and running it more like a traditional two-round genre award.

Phase 1 - Nominations (completed)

At the end of January, we opened and held the twenty-four hour flash nomination period to identify the top five candidates in each category: story and art. The announcement was sent out via Twitter, Facebook, Patreon, and my blog. The brevity of this phase was an experiment. In theory, it would create a sense of urgency and reduce the opportunities for a coordinated ballot-stuffing campaign. It worked. The nomination phase generated more responses than the majority of our full surveys from years past and a significant reduction in stuffing—though there were some very clumsy attempts to do so, of course.

In any case, after tallying the votes, I'm pleased to announce this year's finalists.

Best Story

- "A Series of Steaks" by Vina Jie-Min Prasad (January)
- "Waiting Out the End of the World in Patty's Place Cafe" by Naomi Kritzer (March)
- "An Account of the Sky Whales" by A Que (June)
- "The Secret Life of Bots" by Suzanne Palmer (September)
- "Who Won the Battle of Arsia Mons?" by Sue Burke (November)

Best Cover Art

- Waste Pickers by Gabriel Bjork Stiernstrom (January)
- Jungle Deep by Sergei Sarichev (March)
- Sea Change by Matt Dixon (June)
- Homecoming 2 by Jonas De Ro (November)
- Eistibus, Angel of Divination by Peter Mohrbacher (December)

Phase 2 - Final Voting (open now through 11:59pm EST, February 24, 2018)

This month, you will pick the winners from the top five finalists. Everyone is welcome to participate regardless of whether or not they nominated in Phase 1, though.

Voting is open now at:

<https://clarkesworld-2017-final.questionpro.com>

Thank you for participating. The winners will be announced in our March issue!

ABOUT THE AUTHOR

Neil Clarke is the editor of *Clarkesworld Magazine*, *Forever Magazine*, and *Upgraded*; owner of Wyrms Publishing; and a five-time Hugo Award Nominee for Best Editor (short form). His latest anthologies are *Galactic Empires* and *More Human Than Human*. His next anthology, *The Best Science Fiction of the Year: Volume Three*, is scheduled for publication in April 2018. He currently lives in NJ with his wife and two sons.

Arrival

COVER ART BY ARTUR SADLOS



Artur Sadlos has been a concept artist, illustrator, and art director for almost fifteen years. He designs for the video game industry, animation, and film. Due to the broad and passionate interest in the entire process of creation, he never limited himself to one creative field. In his career, he has occupied many positions and roles sharpening a wide range of skills. He works both in traditional and digital media, striving for their synergy in serving the ultimate end-result. For several years has been developing the project “Mooeti.” A rich, ever-expanding world based

on the ideas of travel and exploration of the unknown. His portfolio contains titles such as *For Honor*, *Witcher 3*, *Hitman*, *Halo 5*, *Batman*, *Total War: Warhammer*, *Dead Island*, and *Call Of Juarez*. He has worked with well-known studios such as Framestore, MPC, Platige Image, Techland and Ars Thanea. Frequent award-winner in the field of art direction, concept design and illustration. His works were published many times in prestigious publications such as *Spectrum*, *ImagineFX*, *Exotique*, and *Expose*.

