



Illustrated by Kurt Huggins

Home on the Free Range

Holly Schofield

The very yellow morning sunshine, the scrape of her rake against the curly grasslike brillo, and the glistening piles of wriggling turquoise caterpillars all served to put Jadey in a pleasant haze of repetition: a meditation of rake, pile, shovel, and dump.

“Hell of a beautiful day! I know we’ve been saying for a solid year that spring is just around the corner.” Helma got up from her perch on the edge of the compost cart. “But, maybe today, it’s finally here.” She leaned on her rake.

“Too soon to tell.” Jadey raked with sharp, short strokes. She glanced up, her eyes following a stubbed-wing hawk as it soared above Helma’s two-hectare hillside ranch, past the fence at the crest, and over the hateful Maxxco operation to the south. She resumed raking, head bent. No time to slack off. Not if she ever wanted to save enough for a ranch of her own.

When the pile of dying caterpillars reached as high as the stained knees of her coveralls, she reached for the shovel, stepping over Helma's tiny pile.

For a few minutes they both worked, Jadey dumping two shovelfuls for every one of her employer's. When the cart was full, she grabbed the handles, snorting against the foul smell. "Third load so far," she said with satisfaction. "We'll be able to do ten more today. That should finally put a dent in them." The bugs had hatched from tiny sparkling blue eggs which had puzzlingly appeared on the blades of the brillo a standard month or so ago. Caterpillars had soon covered the pasture in a writhing blue blanket, dripping from the dentwillow leaves, and even dangling off the scratchers' tiny horns. Since then, all other chores had been put on hold. If the brillo smothered and died, the scratchers would starve.

With a wrench on the handles to get started, she headed to the compost heap by the barn.

"Jadey!"

Now what? She set down the cart and sighed. At this rate, they'd never get done.

Helma still stood by the scattered rakes, one hand above her eyes in a quasi-military salute, squinting away from Jadey into the morning sun. Her cloud of black hair wafted in the slight breeze. She called out, "Hey, do a count, would ya?"

"Of the caterpillars? There must be thousands of the stinkers." What was Helma talking about? The starship captain's daughter didn't seem to have a brain in her head sometimes.

"No, the scratchers. Count 'em."

"What for?" Jadey let the handles go. The larger reason was obvious. The herd was essential to both of them. If Helma failed to meet the breeding targets, she'd lose the ranch. Worse, she'd have to lay off her only employee, wrecking Jadey's one shot at making a life for herself on this new planet. She couldn't go back to work on a starship—not after what happened to Mom. And there weren't any other options here on Skale. Maxxco, the big interstellar conglomerate, would never hire her back, not even if she apologized for calling them irresponsible idiots after they'd planted sixty hectares of Terran bamboo, devastating the brillo prairie ecosystem.

But why count the herd all of a sudden right now? They'd all been present early this morning. And, sure enough, the pasture was dotted with scratchers. Jadey rolled her shoulders in relief. The nearest one, Cocoa, scraped at the winter-browned brillo with her miniature hooves, buck-teeth clipping the tough stems with an audible snap. The size of a Terran pot-bellied pig, the native grazing animals looked like nothing so much as tiny long-eared buffalo. The one Jadey had named Barbara stood patiently a few meters away, ears drooping, nose to the gusting wind. And over there, she could pick out fat Bozo, Jenny with the spotted ears, frisky Lotto, and three more.

"Hold on, where's Fernie? And the other, um—" Jadey counted "—twelve?" The whole herd of twenty breeding stock should have been visible, spreading up the hill to where the dentwillow tree filtered the morning sun. Alarmed, she whistled for Cole.

The collie raced out from behind the barn and bumped against her legs, whining.

"Go find them, boy. Find the rest."

Cole ran upslope toward the dentwillow. Jadey abandoned the cart and strode back to where Helma stood. Cole circled around the huge tree and came back, whining louder.

"Go on, find 'em, dog." Helma made a shooing motion.

Cole looked up quizzically and whimpered.

Jadey stroked his head. "It's all right, boy. It's okay." But it wasn't. "Where the hell are they?"

"Let's run down the options," Helma said, squaring her shoulders.

"This isn't some shipboard drill, Helma."

"Calm down. We'll find 'em. They've just wandered off or something."

"First, let's get these ones safe." A wave of her hand and a couple of repeats of "Circle, boy, circle!" and Cole charged after the eight scratchers, nipping at their hooves, sending them trotting toward the barn.

The dog, part border-collie and part who-knows-what, had turned up one day, probably a stray from forty kilometers away in K-town. Jadey had spent days earning his trust, throwing soy scraps to him, drawing him closer. Herding ability, according to her reading, was instinctive in

the collie breed, even extending to these indigenous scratchers slightly smaller than himself. She'd only had to teach him a few commands and hand signals, and he'd gotten the hang of it. Sort of like she'd fallen into ranching, even though it was a far cry from pulling wrenches on an interstellar ship. Although, with the continual setbacks on the ranch—everything from marginal winter forage to these blasted caterpillars—Cole might be the more successful of the two of them.

Time for action. "Let's check the fencing." Jadey strode uphill, slipping and sliding on the caterpillar-slick brillo, not even checking if Helma was following. She might be a ship-raised grunt-turned-ranchhand, but she had a stake in this too.

Her whole body ached. It wasn't just the higher gravity here on Skale—10 percent higher than Terra; in her eleven standard months here, she'd adjusted to that and to the equally heavy air pressure. It was the constant stress. On Skale, it seemed danger was always just around the next smelly, dirty corner.

"Relax, Jadey. Maybe Fernie led 'em through a hole in the fence. They can't be far. It'll be *fine*." Helma trailed after as Jadey trudged through the ankle-deep caterpillars along the southern fence line. Beyond, Maxxco loomed: a huge complex containing the mill, various factory buildings, and the extensive bamboo plantation. The caterpillar invasion had hit them too, but not as hard.

Meter by meter, Jadey inspected the nano-fiber fence and the green telltale lights. The overhead netting, installed at her repeated suggestion to protect the herd against the massive stub-winged hawks, seemed intact too.

"If we'd tagged them . . ." Jadey swallowed the rest of her words.

"What?"

"Nothing." If they *had* tagged the scratchers, they could have tracked them now. But there was no percentage in reminding Helma that she'd made yet another poor decision. It would have meant another bank loan and Helma had talked herself out of it, saying that scratchers were indigenous to Skale and had survived millennia without a problem. Jadey had eventually given up on the idea too, telling herself it was because of sheer economic necessity rather than the thought of cruelly puncturing the scratchers' long sensitive ears.

"They gotta be here somewhere. Don't they?" Helma stopped and rubbed sweaty hands on her clean coveralls. Jadey almost felt sorry for her. Helma had coasted through life so far, hardly even venturing into the grubby engine rooms where Jadey had spent her own shipboard childhood and apprenticeship. In some ways, Helma was more of a puppy than Cole had ever been. But if she got frustrated and quit, she could grab a silver-collar job with the next starship that came to port. Or Maxxco would snap her up for a management job. Jadey wouldn't be so lucky. She quashed the always-lurking memory of the bitter tang of engine room smoke.

A talpid scuttled past, stopping occasionally to slurp up a few caterpillars with its soft mouth. Slightly smaller than a scratcher, it waddled like a beaver, sharp-pointed digging claws glinting in the sun. Talpids were a common sight, darting in and out of their tunnels under the dentwillow tree. Insectivores, they ate all kinds of small bugs including the pesky caterpillars. Jadey hoped they would breed a lot this year in response to the recent caterpillar population explosion, so that their increased numbers would reduce the quantities of caterpillars next spring. Trouble was, the next spring was a full twelve standard years away. The seasons on this planet were three standard *years* long—her mind still stumbled over that fact, but it influenced every aspect of the ecosystem.

Above, a tiny air-badger perched on the fence above the netting and then launched itself, stretching its parachute-like membrane taut from wrist to ankle.

Jadey watched warily as it sailed off. There were so many things about this environment no one understood. The scientists at Maxxco could venture guesses as to what lay ahead in the coming spring, but the two standard years since Maxxco had landed and the fledgling colony of K-Town had formed had all been in the temperate winter months. There just wasn't much data to work from.

She wanted to know everything about Skale. Any spare hour was spent at the computer,

running ecosystem projections and models. Last night she had dreamed of a gigantic food web, all the flora and fauna intersecting in a huge interconnected map, a spiderweb that would fill a cargo hold, more complex even than her grandparent's legendary Saskatchewan grasslands back on Terra.

She put a hand on a fencepost and stretched a leg out. Her calves ached, her wrists hurt, and her abdominal muscles stung. Ranching used different muscles than shipboard duties. But, she reminded herself, there was no going back.

Another few steps and they were back by the abandoned cart. They'd walked the full perimeter. Nothing. Twelve scratchers were still missing. "Nobody's stolen them." Jadey said, more to herself than to Helma. She ran a hand through her short brown hair. It was possible some K-town low-lives would undertake a two-hour joyride way out here to steal the valuable herd but, if they had, they would have left tire tracks.

And, in any case, without a contract, thieves would get just pennies on the dollar. K-town was too small for a black market. Maxxco wouldn't buy back the herd from anyone but Helma—the upscale exotic leather market required assurance the stock had originally come from the Maxxco embryo tanks. The lump sum amount would be Helma's only profit for the year, and Jadey's only paycheck.

Assuming they found the missing scratchers, of course.

Helma grabbed Jadey's arm with a damp hand. "Please. I *can't* report to Dad that we lost 'em." The weekly reports were a requirement of her father's backing of this venture. And a silver-colored pain to Helma.

Jadey shrugged. "So don't tell him. Yet."

"And, dammit, if half are gone, how can I make payments on that third loan?"

Jadey bit her tongue. If Helma hadn't foolishly bought some second-hand equipment at the K-town auction last week, junk from a decommissioned shuttle, the ranch could have afforded tags *and* cameras. Supposed to get food staples, she'd come back with miscellaneous equipment and a case of beer. And presumably less stress, since Jadey had noticed a charge for "recreational sex, one male" on the accounts.

Nearby, Cole barked at a velvet-furred talpid scuttling near the scratchers he hadn't yet rounded up. It ignored him, heading for a trapdoor near the dentwillow.

Jadey squinted into the sun, watching its path. Fleishy appendages, slightly larger than the Eimer's organs on Terran moles, ringed its snout like wiggly worms. A little row of blunt teeth capable only of squishing caterpillars and other insects was barely visible beneath the snout. There was no way a talpid could eat meat or even bite: scavenging for frozen insects kept them fed during the long three-year winter, it seemed. That was about the only part of the food web she felt she understood.

She was keen to study the talpids further, when she found time. The warrens especially intrigued her. Each tunnel was just under sixty centimeters in diameter, forming a cylinder as wide as Jadey's shoulders. The entranceways—and maybe the interiors—were slicked with spit or mucus hardened into a ceramic-like shine. The talpids had constructed trapdoors made of hardened sod, a clever protection against the stub-winged hawks, other predators, and, presumably, prevention against the occasional scratcher stumbling in.

Helma spoke in her ear. "At least we know the talpids didn't take 'em."

The scurrying talpid stopped next to the last scratcher, Lotto, and raised a forepaw. A spur jutted out from its wrist and swiftly gored Lotto's foreleg.

The scratcher jerked but couldn't pull free.

Helma started forward, shouting, and Jadey grabbed her by the sleeve.

Cole snarled.

Jadey whistled a sharp command.

Cole hesitated then came to her side.

"Stay here, boy. Those talpids have nasty claws." She knuckled his furry head. The animals weren't known to attack, but on their home turf they certainly might defend.

The talpid dragged the terrified Lotto to the nearest trapdoor and used a hind claw to flip the

circle of sod open. It released its spur from her hamstring then head-butted poor Lotto right into the hole. With a dim look back, as if it knew the two humans were watching, it scooted downward after the scratcher, its hind claw again catching the edge of the lid neatly.

The trapdoor flopped shut with tight finality.

“Well, I’ll be a ship’s grunt!” Helma kicked at the ground in disgust.

Jadey squeezed her eyes shut, blocking out the sun and the failing ranch.

They knew nothing about this planet.

Nothing at all.

* * *

Jadey’s tea had gone cold since they’d started brainstorming. She set her mug down squarely on the plastic kitchen table and rested her blue-crusted fingertips on Cole’s head.

“Okay, say we borrow an excavator from Maxxco and level the hillside . . .” Helma trailed off before Jadey could even raise her eyebrows. There were only about six things wrong with that.

“If we knew how the ecosystem functioned, we could work with it, not against it,” Jadey said for the fourth time. “The talpids’ behavior must be something to do with springtime coming. We just have to figure it out.” She pointed at the summary of Section Six of the Skale Territory bylaws that she’d printed out and hung on the wall as a reminder more to Helma than herself. She read off the heading: “First, do no—”

“—harm. Yeah, yeah. Well, the colony bylaws never figured that the scratchers would be held hostage by a bunch of kidnapping moles.”

“There must be a way to rescue the stock without hurting the talpids.”

“Jadey, honey, for pity’s sake, if the herd was taken late last night, they’ve been underground for fourteen hours by now. For sure, they’ve suffocated. All we can do is cave in the hillside and terminate the talpid warren so that the scratchers we *have* aren’t at risk anymore.”

“And end up in a cell next to Jaime Maxx?” After witnessing the multi-million-dollar penalties and jail time for higher-level employees levied on Maxxco for the prairie devastation just after First Landing, Jadey had no wish to bring down government wrath upon this tiny ranching operation.

Helma grunted in reluctant agreement.

“And, after they’re out, we need to relocate them away from the warrens.” But, contractually, they couldn’t do that either. Maxxco had specified that the stock must be raised “free range,” in situ. Even if they broke that condition, caging the scratchers for more than a few hours led to death. In all previous attempts by other ranchers, the scratchers had died when confined. Speculation as to why ranged from Skale’s heavier atmosphere needing them to be in motion all the time, like the constant swimming of a Terran shark, to simple psychological reasons. Jadey had tried large air fans in the barn and nearly killed Cocoa. She lifted her mug, tempted to throw it against the bland beige wall. Two standard months from now, H-bar-H Ranch’s results—or lack thereof—would determine if Maxxco would give them more breeding stock or simply decline to renew Helma’s contract.

“Maybe we could force nitrogen down the burrows and kill off the talpids,” Helma said. “If we had some handy.”

“No, Helma. Just no.”

“Fish the scratchers out, then.” Helma mused. “Like, what do ya call it, fisherpeople.”

Jadey set her cup down very very gently and pinched the skin between her eyes.

Helma shrugged. “Vacuum them out?” Then she snorted. “Naw, that’s dumb. How would we do that?”

“We could try the yard bot again?” They’d used it a few days ago, to try to suck up the thick layer of caterpillars coating the ground. It had immediately plugged up, and Jadey had spent an unpleasant three hours cleaning blue gunk out of its filter and canister. “With a stronger vacuum attachment?”

Helma stated the obvious. “The hose is way too narrow. We need a better tool. Or a different tool that fits the purpose better.”

Jadey nodded in resignation and sipped her bitter tea, trying not to let her thoughts spiral

down familiar pathways. The talpid tunnels were the size and shape of the starship access tunnels where her mother had died in darkness, suffocated by a fire. She knew the dangers of the psychological parallel, but she also knew the scratchers had to be scared stiff. She pictured Lot-to's trembling legs and Fernie's liquid brown eyes.

"Hey." Helma sat up straight. "How about a tanker truck?"

Jadey looked out the window across the empty fields to the Maxxco parking lot. The row of shiny red tanker trucks gleamed in the sun. Used to deliver bamboo slurry to the housing printshops in K-town, the trucks' tanks were huge and powered by hefty motors. Today was a day off for the workers—if they stole one, there'd be no witnesses. As a brainstorming exercise, it wasn't a bad idea, in theory.

Helma threw an arm out. "It's perfect! Think about it! If a truck can suck up thousands of liters of slurry, it's gotta be able to suck up a few scratchers. We can just leave the talpids alone. And since you know how to drive those trucks—"

"I was fired, remember? I don't have access anymore." Jadey paused. "Unless they never canceled my old passcode. . . ."

Helma whooped. "When have you ever known the Maxxco administration to be competent?" She set down her mug and headed out the door. "Come on," she called over her shoulder.

Jadey stood up. Should she?

It would probably get her arrested.

It was dangerous to use the suction for something besides slurry.

It might injure the scratchers. And the talpids.

But Fernie and the rest didn't deserve to die trapped in a dark tunnel.

* * *

The truck's control panel lit up instantly in response to her code, and Jadey slapped it harshly into gear.

Once she'd pulled the truck into the ranch's yard and backed it up the hill, she instructed it to lower its length of slurry hose. The filter came off easily. She left the tiny camera where it was: perched on the hose end just behind the fittings for the mill tank openings.

Helma, in a burst of energy, had retrieved a dozen of the livestock cages from the barn and stacked them nearby. About a meter a side, light but awkward, they could be lifted by one person but didn't allow a scratcher room to move.

The talpids' trapdoor rested cock-eyed in the opening. Jadey lifted off the heavy almost-circular flap of brillo, exposing the warren entrance. She picked up the clumsy thick hose and hesitated. Was this as stupid as it looked?

"This is gonna be fun. Just don't tell Dad!" Helma grabbed the hose from her and jammed it into the hole. Nearly the diameter of the tunnel, it stuck after about three meters. She flicked the screen, setting suction to maximum. The motor started up. With a whoosh, the hose quivered then settled into a steady beat. A nearby air-badger shrieked madly.

Jadey drummed her fingers against her elbow. They should have started with a lower power level. What if the tunnel imploded? She reassured herself: the tunnels would act like an arch, converting inward forces to compression, and the surrounding soil and tree roots would work like a truss, spreading out the stresses. At least, *that* should be okay.

After an interminable time, at least a minute or two, Helma slapped the control, stopping the vacuum abruptly. The whine of the huge motor diminished as the hose slumped. "You wanna do the honors?" She gestured at the tank's hatch and handed Jadey a headlamp from the truck cab.

Jadey shrugged. Once a grunt, always a grunt. She armed herself with a rake and thick gloves. The hatch opened with another swipe of the screen and lowered its short ladder. She hopped up the three steps and cautiously peered in. The headlamp spotlighted a couple of furious talpids gnashing their tentacle mouths and scratching at the metal flooring. She swept it across the length and breadth of the large tank before seeing the three scratchers huddled just left of the hatch.

"Open a cage door!" she called back.

“Did it work? What do you see?”

“I can almost reach Lotto.”

“Is she okay?”

Jadey got a knee onto the rim of the hatch opening, grabbed Lotto by a horn and dragged her closer. She came easily. Too easily. She appeared stunned or drugged. She held the quivering animal against her chest and staggered down the ladder.

“Poor little girl!” Helma rubbed Lotto’s ears, turning her hands bright blue. “Oh yuck!” She jumped back and wiped her hands on her shirt.

Jadey lurched to the nearest cage, kicked the door open, and shoved the dazed scratcher inside.

“Oh, did you want me to help?” Helma paused in mid-wipe.

Jadey slammed the door shut then forced herself to take a couple of deep breaths. What had she expected, going to work for such an inexperienced employer? Helma was only in the ranching business to show her father up. He’d taunted her in front of the whole ship’s crew about an improper navigation instruction in a shameful scene that Jadey wished she’d never witnessed. As soon as they’d landed on Skale, Helma had declared her intentions to be independent of both her father and the shipboard life. It wasn’t her fault she had zero coping skills in situations like these.

The other two scratchers slowly responded to her low-voiced encouragement and stumbled toward her across the tank. Other than their drowsiness, they seemed in fairly good shape, just banged up from being vacuumed. Their hides were sticky with small unfamiliar brown pods.

The talpids gnashed and snarled as she wrestled them out of the tank with the rake, letting them fall the short distance to the ground. They both scooted up the hillside, heading for a more distant trapdoor.

“Awesome!” Helma grinned happily. She flicked the switch again, forcing Jadey to jump down and slam shut the hatch.

Another five minutes of the roaring machine, another peek in the hatch. Two scratchers staggered toward her as she peered in. They were also covered in the little brown pods. Some kind of seed?

The next three tries came up empty even when Jadey pushed the hose inward as hard as she could.

“One more try!” Helma reached toward the screen.

“Hang on. I bet the camera will show the tunnel’s narrowed or something.” Jadey leaned past Helma and brought up the view at the nozzle end. Shiny tunnel walls speckled with little brown lumps. Caterpillars crawling steadily forward down the slope. Ahead, the tunnel forked, the nose of the hose jammed into the vee where it split in two. The caterpillars flowed to the right, an abrupt turn, impossible for the hose to navigate.

“We could attach the air compressor hose to the suction hose? Shoot the suction hose forward a few feet? I think there’s a compressor hose extension in the truck.” Helma yanked open the cab door.

“Helma, stop. That’d shoot the hose backward. You know there’s only one answer.” Jadey looked sadly at Cole who lay panting in the afternoon sun. He was as much a grunt as she was. “Every tool has its purpose, like you said.”

“Are you sure? Jadey?” Helma stopped, compressor hose dangling from her hands. Her expression gradually changed from concern to delight. “Awesome!” She dropped the hose at her feet and knelt down beside him. “Good boy, Cole, good boy! You’ll go fetch, right, boy? Right?”

Cole nuzzled Helma’s clean brown fingers and wagged his feathery tail.

Jadey couldn’t face the sight and started pulling the suction hose out of the tunnel. Her back muscles stretched and pulled. The hose resisted at first then came all at once, nearly tumbling her over. With deliberate motions, she auto-coiled it then detached the camera. Was she always destined to lose the ones she loved?

“Cole, come here.” She fastened the camera on his head between his colored eyebrows. The sight would have been comical in any other circumstances, but the remaining talpids weren’t

going to take kindly to Cole's invasion of their home.

"Okay, Cole, go on! Go get 'em!" Helma practically shouted.

Cole whimpered and tilted his head at Jadey.

"Yeah, go, Cole, go on. Fetch. Fetch the scratchers here." Her voice grated and her throat hurt.

Cole dived into the tunnel.

* * *

The camera showed a bouncy image of tunnel walls careening side to side as the collie, slightly taller than the height of the tunnel, scrunched down and wriggled in. At the fork, he stopped for a moment, sniffed and then turned right, wading downstream through the influx of caterpillars.

Helma peered over her shoulder. "Such a tough little guy. It'll be all right." She grinned and punched Jadey's shoulder.

Jadey scrubbed at her eyes. "We should have attached a rope to him so we could pull him out. We should have tightened his collar so it won't snag. We should have cleaned the camera lens."

"Details, details." Helma said. "Oh, look, a big room!" Cole was entering a large cavity, round and flat-ceilinged. Tree roots dangled overhead. The walls were pebbled thickly with the tiny brown seedlike cases, and the floor was a writhing mess of blue. Scratchers lay bristly cheek by fuzzy jowl, glazed eyes blinking slowly but otherwise looking unhurt. Fernie raised her head and weakly flipped her ears at Cole's entrance. Jadey counted quickly—the remaining eight were there, thank the gods.

Cole faced the sole talpid. It stood, legs taut, blocking the chamber entrance, flexing its claws. Cole's head jerked several times and a faint bark came out of the hole.

"Don't fight it! Just fetch the scratchers!" Jadey said then felt foolish. There was no audio feed, and the dirt was a good sound insulator. "Fetch," she whispered. The room must be squarely located under the dentwillow tree on the top of the hill. A tree that was protected by Section Six. Even if she was willing to violate the laws to dig Cole out, it would mean removing several dozen meters of hard-packed dirt. Cole was on his own.

"Good boy!" Helma shouted, making Jadey jump.

The collie wiggled forward, trying to place himself between the talpids and the scratchers.

The talpid shifted uneasily and moved a half-meter to the left. Cole turned away, giving them another view of the huddled scratchers, and then a blur of fur as he nudged them and nipped at them. First Fernie and a couple of others walked the few paces toward the chamber exit, then the others followed suit. Finally the last one grew smaller in the camera's screen as they trotted away up the tunnel. Cole glanced over at the talpid then followed behind them.

Jadey let out a breath she hadn't known she was holding. "Good boy, Cole!"

As soon as all the scratchers had taken the turn at the fork, Cole immediately did a one-eighty and crawled back toward the chamber.

"No, Cole!" Jadey ran from the screen to the hole and yelled as loud as she could. "Here, boy, come back!"

"He must think he has to fetch the talpid too." Helma said. "Brave little guy!"

As the stained and dirty scratchers stumbled from the tunnel, Jadey led them one by one into the remaining cages squatting in the shade cast by the truck. Wordlessly, she shoved a handful of brillo through the bars of each, and picked a few sticky pods off their flanks. Fernie raised sad eyes to her, unable to even turn around. They'd be okay there for a few hours, then what? Above the barn, the sun began its descent.

In the chamber, Cole continued to circle and the angry talpid maintained an even distance, like two prizefighters testing each other. On the second circuit, the talpid lunged and slashed at Cole. He retreated, and the camera blurred when his rump must have hit the wall. Then the picture became a view of the same patch of ceiling, jerking every so often.

"He's caught on something!" Helma gasped.

Cole struggled, twisting and turning, finally sending slime and dirt over the camera lens, clouding it.

Jadey stripped off her jacket. “Make sure the compressor hose doesn’t kink.”

“Say what?”

She sat down and swung her feet into the dark hole. “Time to send in the next tool.”

* * *

The air in the tunnel held the oily reek of caterpillar guts, talpid musk, and her own sweat. She gripped the air compressor hose nozzle tightly, her only weapon. Who knew what an irate talpid could do? The faint sounds of Helma’s encouraging voice gradually faded behind her and were replaced by thin scuffling sounds ahead and the thud of her heartbeat.

Her coveralls grew slippery as she inched forward, crushing more caterpillars in her path, moving scarcely faster than their looping gait. One elbow after the other. Pods and dead caterpillars down her collar, between her breasts. A beetle scuttled away into a finger-sized hole, waving thick antennae. The walls narrowed as the headlamp gave a dim view of dangling roots and more muck. Why hadn’t she gotten a stronger light? Almost to the fork. As the tunnel split in two, a moist breeze wafted from the left-hand fork. The burrow network must be a huge labyrinth of tunnels below the hill.

She turned right, scraping a hipbone in the process. Pods stuck to the walls like bizarre decorations. The trouble with the slow progress was that it gave her too much time to think. She tried to observe the pods as her headlamp swept side to side with her movements, anything to avoid thinking about what lay ahead. She could use the compressor hose to drag out Cole’s body—no, think about the pods. What were they? Why did caterpillars want in the warren? Why had the talpids dragged the scratchers underground if it wasn’t for food?

For once, the full weight of Skale’s air pressure pulled at her lungs. She sucked in a long breath. One hand was bleeding freely and her hair was pasted to her scalp with blue gore. She thrust herself ahead, knees digging into the slick floor, hose nozzle like a lance in front of her, trying not to think of death, and flames, and her mother.

As she approached the chamber, the light from the headlamp appeared to dim as it diffused across the room. Sure enough, Cole’s collar was caught on a gnarled root that hung from the ceiling. He rolled his eyes at her, the whites showing. Poor baby. The talpid, eyes darting, danced in place on her left.

She mimicked Cole’s earlier actions, blocking the talpid from its quarry. Maybe she could herd the creature out the exit. It crouched and hissed at her, bushy eyebrows furrowed. Then it charged. She fumbled the nozzle handle and it was upon her, slashing, kicking, and clawing. Her hands and forearms took the brunt, instinctively protecting her face. She karate-chopped the beast’s thick neck, and it withdrew slightly, hissing softly.

“I’ll show you who can do that louder,” she muttered and squeezed the air compressor handle once. The sudden hiss made her jump almost as much as the talpid. It squealed as fur blew back exposing pale skin, then attacked. She held her fire as long as she dared, before letting go a big stream of air. The talpid’s mouth opened and its tendrils slapped back against its fur. Crazy, one of the Terran mole facts she’d read came to mind. Their short pelts had no direction to the nap and couldn’t get brushed the wrong way, allowing them to move with ease backward down a tunnel.

More blasts, holding it at bay. Her mind went sideways. The reference material had also said moles’ saliva contains a toxin that paralyzes earthworms so they could store their still-living prey for later consumption in special underground “larders.” Could the talpids’ hind spurs serve a similar function, allowing them to capture the scratchers?

The talpid charged again. She squirted more air at it, driving right back against the chamber wall. She tasted blood—she’d bitten her own lip.

She reached behind her and, after a fumbling minute, released Cole’s collar from the root. His wet tongue warmed her neck.

Time to get out of here. She drew in a breath and felt like her lungs were still empty. There was probably a buildup of carbon dioxide in the chamber—Terran moles had a high tolerance for it, spending their lives underground. Maybe, she thought, she could get some oxygen by sucking on the compressor hose, realized how silly that was, and realized *that* meant she was in deep

trouble. But adding oxygen to the mix in the chamber might revive her. A few gentle puffs right in front of her and she felt a bit better. "Let's go, boy."

The talpid continued to pace against the far wall as if deciding whether to charge. She didn't dare turn her back on it. And Cole was refusing to leave before she did. He licked her arms and twisted around her, making her dizzy.

Finally, she wound a loop of the hose through Cole's collar and backed out, dragging him behind her, the whites of his rolling eyes staring into hers for the endless journey. Thankfully, the talpid didn't follow.

Her world shrank to the dog, the tunnel, and the darkness. Occasional puffs from the hose gave her enough energy to keep extending one leg backward after the other.

Even after her scraped knees stung like fire.

Even after her headlamp went out.

At the fork, she managed to straighten out, draw her feet to her chest, and release Cole ahead of her. He whined but scooted toward the fresh air, slipping on the incoming caterpillars.

Head spinning, she squirted air clumsily. The blast hit the roof full-force and loosened the thin coating, sending dirt cascading down on her face. She coughed, silt filling her nose. Suddenly, she was a child again, screaming at the caustic smoke billowing into the grunts' quarters, running blindly toward the engine room, sirens blaring, hands grabbing her shirt. Voices shouting her mother's name, shouting that her mother lay trapped in the narrow serviceway. The smell of charred flesh.

Her head spun and the tunnel shrank to black.

* * *

"Thought you were a goner." Helma's breath tickled her face.

Jadey lay outdoors flat on her back, an evening breeze cooling her sweat. She tried to raise her head and it stuck to the brillo. "Cole?"

"He's fine. Here." Gently, Helma placed Jadey's hand on the soft fur of Cole's paw. A lick of his soft tongue and Jadey relaxed.

"Jade, I was so worried. I was almost ready to steal an excavator."

"The herd?"

"All safe and sound. But it was you I was worried about. Honest."

Jadey sat up, the back of her head and her coveralls ripping off the grass like Velcro. "Thanks. But grunts are expendable, aren't—"

She broke off at the sight of Helma. No more puff of hair, no more pristine coverall. Caterpillar guts coated her entire head, enough blue gunk to grease an old-style starship engine. Dirt and more blue crap caked her shirt and pants, and she was missing one boot.

"Well, somebody had to go in there and drag you out, didn't they?" Helma grinned with blue lips.

"It looks good on you," Jadey said. Her lip stung as she smiled back.

"Let's get you home."

Home. The word felt good. Jadey rolled to her knees.

The caged scratchers all had their heads down, looking miserable. She blew out a breath. Leaving them in the cages meant they'd soon die. Letting them out to pasture meant they'd be taken by the talpids all over again.

She looked up at Helma.

"Yeah," said Helma. "We haven't solved anything yet."

* * *

Slumped in the cheap plastic chair on the porch, Jadey daubed on antiseptic. The last warmth of the setting sun soaked into her tired muscles. Her head smarted where she'd had to yank out chunks of hair to remove the brown pods. Beside her, Cole stretched in the sunlight, his fur equally tattered, his tail wagging as he dozed. There wasn't much time. The scratchers were safely caged and the cages were safely in the barn but, due to the dying-in-captivity issue, how could they protect them overnight? Jadey shook her head, still feeling like she couldn't breathe from the near-anoxia or maybe just queasy from her failure.

The porch door banged, and Helma silently handed Jadey a beer from her special stash. Her knuckles were still blue-tinged.

Jadey hesitantly reached out. “Thanks?”

“You’re welcome. You really are, Jadey. I couldn’t have gotten this far without you. Here, something else.”

Jadey took the tablet with blue-stained fingers. “H-bar-J Partnership Agreement,” she read aloud, squinting at the fine print. “H-bar-*Jay*?”

“We’re not going to make the ranch work unless we’re both fully committed.” It was the most mature statement Jadey had ever heard Helma make.

Jadey waved the tablet. “What does this say, exactly?” It wasn’t an offer she was going to leap at. The ranch would bleed money until the profits from selling the scratchers came in. And Helma’s debts weren’t something to take on lightly.

“Full 50-percent profit-sharing. No liability on your part for loans or debts. A five-year commitment. I . . . need you on board, Jadey.”

“Did a lawyer look at this?” She knew she sounded ungrateful and surly.

“I used boilerplate. Plus Dad made me learn about all that stuff last year. Time I put it to use.”

“But . . . when did you do all this?”

“Just now while you were lollygagging.” Helma’s teeth shone. “I also smoothed things over with Maxxco—taking the truck was just a big misunderstanding as far as they’re concerned.”

Jadey raised an eyebrow and sipped the beer, considering. A partnership with naïve, over-enthusiastic, immature Helma? No ranch of her own? “Think we can make it work?”

“With my great attitude and your sweat equity, I know we can.”

Suddenly it seemed appealing. Together, they could beat whatever Skale threw at them. Jadey pressed her thumb on the signature line and lifted the beer. “Cheers. I’m a ranch owner! Well, half of one.”

Helma chuckled with relief. “Not bad for a grunt.”

“And you’re not bad for a captain’s daughter.”

Helma snorted, then cocked her head. “Oh, wait.” She hopped off the porch and headed for the storage shed. Bemused, Jadey listened to further thumping and banging. The last rays of the sun angled across the pasture, and Jadey noted the brillo was no longer quite so brown. Green shoots were thrusting through the wiry strands of last year’s grasses.

The sound of a pleased “*Ta da!*” was followed by Helma dragging out a section of fencing. “Good thing I bought twenty rolls at that auction! Let’s make a larger lean-to beside the barn to put the scratchers in. And also let’s put a fence around it in a *huge* circle. Talpids don’t dig that fast, right?”

“Right, they’re too big. Not like moles back on Terra.” The fencing might work, for a day or so. Jadey stroked Cole’s dirty fur with an equally dirty hand and wrenched off the last few pods. She held one up close, squeezing it. It popped open and a grub fell out. A bright blue grub.

“Helma.”

“What?” Helma called back over her shoulder, heading into the shed. “We need to hustle on the fencing—”

“Didn’t we also get some floodlights from the auction? Get ‘em out.” Jadey sipped beer, thinking hard.

A crashing noise, a curse, then Helma dragged forth a dozen or so large floodlights.

Cole got up and circled the activities warily.

Jadey drained her mug. “Listen. See if this makes sense. The caterpillars are all morphing into pupae. Like this.” She held up the wagging contents of the pod. “They need a place underground to pupate—safe from the hawks and such—so I’m guessing they’ve evolved, over millennia, to head for the talpids’ warrens. The pupae will need lots of food when they wake up, like first-class colonists coming out of stasis sleep, right? Hungry little buggers. Now, think of the talpids as a food delivery system. The talpids instinctively gather the scratchers, doping them into submission. The talpids must have been thrilled there were so many scratchers on this plot of land this winter. See?”

Helma stopped in her tracks, letting a light fixture dangle from her hand. “The talpids know that taking scratchers would give them plenty of caterpillars to eat next cycle?” She crossed the yard to the porch. Behind her the sun began to lose its glimmer at the horizon. “So that’s why the caterpillars were crawling *toward* their predators? Because of an instinct to pupate underground?”

“Yup. A sure sign that spring is coming. But it’s not in precise lockstep—phases will overlap with each other. Some of the pods are already hatching.” The grub she held seemed to be opening translucent wings but in the gloaming it was hard to be sure.

“So what d’you want these for?” Helma gestured at the floodlights.

“If we extend the daylight hours by stringing up the lights, we can sort of bypass spring here in the pasture. The talpids will think summer has come already. That should mean they’ll stop taking our scratchers.”

“For all three *years* of springtime? That’s a helluva—”

“Nope. We only have to do it for the next two standard months—until we sell back the herd. Skale hasn’t beaten us yet.” Off the side of the porch, an insect fluttered. Something large and blue with an unfamiliar shape.

Helma waved her hand, scattering several more flying bugs. “And when they hatch, what’ll they eat? By rescuing the scratchers, we’ve taken away their underground food supply—” She clapped a hand against her arm. “Ow! Something stung me!”

Jadey batted a couple away from her face. Some kind of butterfly, maybe. No, a sort of stub-winged dragonfly. The grub on her palm stretched its filmy new wings out wide. Was that a stinger on its tail?

She quickly chucked it onto the porch floor and whistled for Cole. “Get inside, Helma.” Dozens of dragonflies began to batter themselves against the railing and walls. “Spring just arrived. In earnest.”