

# Satan's Banyan- Sample

## Chapter 1: Toxic Treasure

Professor Dana White affectionately referred to it as her "workshop from hell." The coal fire, smoldering beneath the abandoned town of Centralia, harbored a treasure trove of newfound extremophiles—organisms thriving in its hot, toxic environment. Her research was as dangerous as it was game-changing.

Ben, her new grad student, followed her closely as they cautiously navigated the graffiti-marred streets, side-stepping billows of sulfur-laced steam that belched through the fractured concrete. Dana took her safety protocols seriously. She hadn't lost a student yet and would keep it that way.

Her windbreaker rustled in the brisk October winds; her chilled face conflicted with the heat radiating over her feet. "The coal fire started over sixty years ago in the abandoned mine, and it's been spreading underground ever since. Lately, some unusually hot spots have been forming."

The chill brought wistful memories of her childhood in sunny San Diego. How had life led her to this godforsaken part of western Pennsylvania? By the time she'd graduated college at UC San Diego, preferring her science to social life, she had few friends to stick around for. She was irresistibly drawn to Susquehanna University by Centralia's unique opportunity.

Her office and labs were ten miles from one of the few places on Earth where she could measure heat-accelerated evolution in real-time and speculate on how life could survive hostile environments akin to distant planets.

As the toxic clouds rose through tangles of severed powerlines, Ben tightened his baseball cap, his demeanor growing increasingly solemn—a reaction she'd seen from so many newbies. Though he towered over her 5'2" frame, he stayed close behind. His southern drawl wavered as he spoke. "Those Yellowstone hot springs were gross, but this place gives me the creeps."

He'd just finished an internship at the Institute for Thermal Biology near Yellowstone National Park in collaboration with Dana's group on a new biofuel process. Ben was well-versed in working with heat-loving microbes that colored the hot springs.

She strode over a pothole of stagnant stormwater, its edges coated with a brown glaze of crystals. Centralia radiated an eerie malevolence, yet it spawned a trove of delightfully freakish biology for her to study. She lived to solve nature's most bizarre puzzles, and this place had no shortage.

The kid shadowed his new boss' moves. "Tell me more about these hot spots."

She wished she knew more about them herself. "We've drilled a sampling well near one. That'll be our last stop today." Dana took a water bottle from her backpack, handed it to Ben, and opened one for herself. "That's why today's training is so important."

Ben scanned the area. "So quiet. No birds or insects. How long's it been this way?"

She sipped her water. "Most residents fled due to cave-ins and toxic fumes. The most stubborn ones were displaced by eminent domain in the nineties. The fires never breached the surface; they just baked the place from below. Every building was demolished as a precaution."

She took a hazmat suit from her backpack, pulled it over her street clothes, and pointed toward a wooden shack several blocks away. "Your office is over there. Suit up. We won't need the helmets until we get there." An edge of insecurity colored her voice.

Working with the students was her least favorite part of the job. Still, despite her social awkwardness raising eyebrows in group meetings, the students treated her with respect.

Ben quickly put on his safety gear. "Geeze, out west, I never had my own office. Hear my project's brought you lots of grant money."

*His* project? The kid had quite an ego. But he was right about the grant. That Yellowstone project could be the key to her success with her discovery of a new ultra-hot virus—V-23. It had great potential as a bio-diesel catalyst.

She brushed off his comment. "Oh, we have lots of other stuff going on, but that grant *does* cover your stipend." Dana flipped back her short brown hair and smirked. "Believe it or not, we've just fixed your office up. Looks like crap, but it's safe."

The kid could use a dose of humility. She gazed down at a three-foot gap in the street. Ben took a long stride over the trench while Dana quickly stepped around, lagging behind. He kept his lead as they reached the shack, resembling space explorers in their baggy white suits.

A few feet away, a pressure relief pipe hissed and spit. Grotesque mineral deposits of white, green, and yellow crust encrusted the tube's top, glistening from the fresh spray. Ben stopped in his tracks and examined his helmet.

Centralia had a way of humbling people. Dana resumed her lead. "Your headpiece contains an adsorbent re-breather for toxic gases. You'll need it whenever you're sampling or in enclosed spaces."

Ben sniffed. "Sulfur dioxide."

"Yep. When you're not wearing your gear, you'll catch whiffs of it occasionally. Shifting drafts can carry it through vent tubes and ground cracks. But it's the carbon monoxide you need to look out for. It's odorless. Monitor your CO badge often, and if it turns from green to red, use your headpiece or evacuate."

Ben jotted a note on his tablet and underlined it. "Carbon monoxide wasn't a thing in Yellowstone. The thermal ponds did stink of sulfur compounds, though. But we had that super volcano under the park. They say it could blow anytime during the next ten thousand years." He looked at his watch. "I'm not holding my breath."

Dana nodded. "Where there's extremophiles, there's danger. But we're in a great science niche. So many exciting possibilities for fieldwork—volcanos, underwater vents, and more new discoveries every year. Put in a few years for that Ph.D., and the world'll be your oyster."

Ben checked his CO badge. "I hear this town still gets visitors."

"In the summer, kids come from as far as Philly and Washington DC, climbing over the barricades. They spray graffiti and take selfies for bragging rights. But it's getting too cold for that now. If you do see any, report it to campus security. Don't try to deal with them yourself."

They reached the weathered shack. Dana said, "This used to shelter coal miners waiting to descend. Now it's a place to organize your samples."

Ben nodded and pushed on one of the walls. "Seems pretty sturdy."

"Let's put on our helmets, and we'll have a look inside." Dana activated her microphone, pointed to an old-style school desk, and tapped on a sawhorse-supported wooden lab bench. "Nothing fancy, but it'll do for packaging and labeling sample tubes." Ben shook his head. "Don't worry, you'll have a real desk and computer at the university," she said with a smirk. *Don't let this kid get to you.*

Dana removed her phone from a freezer bag in her pocket and checked the time. "We have one more stop before heading back to the labs—that super-hot sampling well."

They removed their helmets and retraced their path toward the town's entry gates. Dana shaded her eyes and pointed to a group of hawks circling over the nearby field. "I don't see many of those around here. I wonder what they're after?"

"Field mice?" Ben guessed.

"No. Rodents can't take these sulfur compounds."

As they approached the area where the hawks were, about twenty-five yards away, a steel pipe emerged four feet from a concrete mound.

She pointed to the pipe. "That's our latest sampling tube. It connects to a hundred-foot-deep section that we thought was long burnt-out. But lately, it flared up again. It's a real mystery. When you sample, you'll get a reddish-brown, glossy matrix. It's mostly hydrated silicates but also contains our V-23 virus. Use a full hazmat suit and vent the pressure before taking samples."

Ben's eyes drifted west.

Dana frowned. *Focus. This is important.*

He pointed toward shimmering heat waves about fifty yards out, rising toward the hawks above. "What's over there?"

She had no idea. They donned their helmets and cautiously walked toward the mirage. The grass darkened as they approached. They stopped near the edge of an eight-foot-wide pit and peered inside.

Dana gasped and clutched Ben's arm for support. Staggering toward the hole, he clawed at her sleeve. She pulled him back from the edge and stole another peek. From Ben's mic came an inhuman groan.

## **Chapter 2: The Ritual**

Ten feet below, a tangle of blackened limbs and faces, mouths stretched wide, sent a jolt up Dana's spine.

Although her legs were like jelly, she pulled Ben back to the road as fast as she could.

*Who were those poor bastards, and how did they get there?* She'd been at the site just two days ago, and everything was fine.

She sat at the curb, wanting to help Ben yet unable to help herself. Next to her, he dropped to one knee, hyperventilating. She put her hand on his shoulder. He turned his head to vomit. Frustrated that words escaped her, the best she could manage was to pat his back.

After a few long minutes, she stood and handed him another water. "Just take it easy. I'll call the police and get extra hazmat suits from the Jeep."

Ben took a swig and coughed. "They're heavy. I'll get 'em. Maybe if I move around ...."

*Neither of us should be alone.* She helped him up. "Thanks. Let's get them together."

On their way, she dialed 911. After a hurried exchange with the operator, she announced, "They're on the way."

Another of those dreaded silences stretched the walk to the car. Like most people, Ben reacted to her reticence with more silence. She followed the quickest path back: two blocks south, one hundred and twenty steps east, a right at the missing manhole cover, and finally, twenty-seven steps north. In her state of mind, her obsessive routine was a much-needed diversion.

Returning to the site with a pile of safety suits, they sat at the curb again. She forced herself to make eye contact with Ben. "You're still pale. Wait here for the police and have some more water. I'm going over for another look."

Ben attempted to get up but sank to the curb. He closed his eyes and shook his head. "I'll be OK. Go 'head."

She took a deep breath, put on the helmet, and returned to the pit. This probably was due to the rise in temperatures, which meant trouble for the project.

She stood a foot back from the pit's edge and steadied herself. The blackened floor sloped toward a hole in the left wall. A scatter of rocks was embedded in the right wall. The jumble of blackened bodies was pushed to the right as if a superheated blast of air followed the cave-in. The pit was likely connected to the new hot zone sampling site.

Try as she might, she couldn't avoid those faces reflecting the last seconds of terror and pain. She closed her eyes and shuddered as screams echoed in her head.

Then, she saw it. A web of glistening brown filaments surrounded the charred mass. *The V-23 virus matrix.*

She plodded back toward Ben, hands shaking and stomach churning, upset more about the future of her project than the victims. Her new virus showed potential, yet the extreme heat it thrived on could shut down the work at Centralia.

Guilt briefly tugged at her conscience. *Their families must be going crazy looking for them.*

Then came the cold logistics. *That virus shouldn't survive these cool temperatures, but we'd better use safety level one bio-hazard protocol to be sure.*

She had to alert the University while protecting the project. A temperature map of the tunnels under Centralia was now more critical than ever.

When she returned to the curb, Ben was shivering, head in the crook of his arm. Cockiness aside, this was *some* first day for the kid.

Dana was removing her headpiece as the first patrol car pulled up. The chief got out and approached Ben. "The report said you're from Susquehanna. Which one of you is Professor White?"

Ben nodded toward Dana.

"That's me." She handed a hazmat suit to the chief. "I was doing a safety training and found *that*." She pointed towards the pit. "You'll need to suit up. The area is a possible biohazard. There's lots of unusual microbes growing down there."

She led the chief to the edge of the hole. He stared down for a couple of minutes. "Looks like these two tried to climb out." His voice trailed off. "Maybe there's three. Hard to tell."

The chief took Dana by the elbow and led her back to the road just as two more squad cars had arrived. "I've seen some crispy critters in my time, but nothing like that. And that shiny brown stuff. What's that about?"

