

# Shimmers of Hope

The Sun's glow rippled through the window, penetrating the darkness of the small room, bringing Nyota awareness of the day. With the light came the sensations of the city, reminding her that she couldn't linger in the comforts of her room.

Snapping to activate her HoloTV, she allowed herself a brief moment to listen to the grim-faced reporters. "Sleeping sickness continues to ravage the Democratic Republic of the Congo, yesterday bringing new records-" Nyota hurriedly snapped to shut off the television, but she already felt the panic settle under her skin, residing all too comfortably in her heart.

Making sure her long sleeves were secure around her arms, she hurried down the streets of the bustling city, listening carefully for any buzzing. Sleeping sickness has dramatically increased in Lubumbashi ever since the release of the genetically modified tsetse flies, plaguing people's minds and clinging to them like water, unable to be shaken off. Predominantly during daylight, the wretched fly made its rounds, inflicting the dreaded bite that gave sleeping sickness.

As Nyota approached the main forum, she began to hear a loud, robotic voice sweeping across the crowd of people gathered below. Hurring, Nyota came into view of several RoboBots, standing on the pavilion and addressing the gathering, "The ATDCC (African Trypanosomiasis Disease Control Center) launched our genetically modified tsetse flies with the altered bacteria Wolbachia and Sodalis in the Democratic Republic of the Congo. The number of GM flies released was equivalent to 85% of the population of flies in 2055. However, due to a break in the link between Wolbachia and Sodalis, the parasite grew resistant to the bacteria. The resistance to the modified bacteria allowed tsetse flies to carry sleeping sickness once again, but with far greater populations, causing the current epidemic."

Boos and wails rose from the crowd as Nyota joined them, her outrage at the ATDCC manifesting itself. "However," the RoboBots voice gaining volume in response to the cries, "The ATDCC has been working on a new line of modified tsetse flies to counter the effects of the current surge of sleeping sickness. While still altering tsetse flies, the goal is no longer to eliminate sleeping sickness, but tsetse flies entirely." Nyota's eyebrows raised in surprise. When she had discovered from her HoloTV that the ATDCC was holding a public meeting, she was interested and excited. But it never occurred to her that they would be proposing the eradication of a species. Like most of the crowd, she had assumed it would be on the new study on the anti-microbial properties of ants. But not this.

"The ATDCC will release sterile adult males into large concentrations of tsetse flies using our special drones. We will also set up traps to methodically trap and kill tsetse flies. By discharging these every few months, we can decrease the population of tsetse flies and, to an extent, dramatically reduce the number of sleeping sickness cases. Local governments and officials have conveyed their support for this program, named the Tsetse Fly Eradication Program, (TFEP) will be started in a few months. That concluded this ATDCC meeting. If you have any questions, please alert the MiniBot on the stage."

Nyota watched silently as the RoboBots glided away, indifferent to the emotions they had caused below. Nyota heard cries of anger, confusion, and happiness in a chaotic chorus. "Only when their reputation is in jeopardy from the havoc they have wreaked do they try to do something!"

"So... that's it? Even after what happened the last time they modified the flies, they're doing it again? Well, if it ends the disease..."

"The end of sleeping sickness is near! Hooray!"

As for Nyota, she was just as muddled. While she was happy that the epidemic could finally end, eliminating an entire species felt wrong. In a stupor, she slipped through the crowd, weaving through until she escaped its tight embrace.

She let her legs carry her blindly through the city, taking a well-traveled path towards the western side of Lubumbashi. The pungent odors of the city shifted through the air, the faint murmur of conversation drifting through Nyota's ears like a dandelion in the breeze. After walking for several minutes, she finally reached the brief break in the city. After the building of farms and fields, Lubumbashi had expanded, creating an area of agriculture in the urban landscape.

As she passed through the farms and fields, watching the Irrigation Drones methodically spray water upon crops, a heavy odor slammed into her in a sharp wave, far surpassing the aromas of the city. Pesticides.

Nyota saw the farmers spraying them now, sprinkling the foul-smelling spray all over their crops, killing pests and helpful insects alike. A scowl appeared on her countenance. The so-called "solution" ATDCC proposed would do nothing to stop pesticides or help the natural pest-removers killed along with the pests.

Nyota shook her head in frustration and continued, starting uphill, arriving at the top of the hill as the smell finally cleared. Nyota glanced around, taking in the tranquil surroundings before her, finally glancing down at the tombstones scattered near her feet.

She quickly tiptoed as if to not disturb ghosts, biting her lip nervously. The graveyard was a relatively new place for Nyota to visit, and she wasn't conditioned to the fog that eerily drifted past the tombstones or the thick layer of sadness that seemingly clung to everything.

She slowly walked through time, passing the oldest stones first back from the Coronavirus and making her way to the recent tombs.

There she crouched down, silently reading the engraved words on two of the newest stones. *Kujali Adjuan, 2021-2066* and *Caleb Adjuan, 2023-2066*. Nyota's mother had been an entomologist, fascinated with the diverse array of insects found in the Congo. Nyota knew there was no way she would ever support the new program to eradicate the tsetse flies, even though it was sleeping sickness that sent her and Nyota's father to the grave.

Eliminating the tsetse flies could have adverse effects on the food chain, but more significantly on other insects. The traps designed by the ATDCC could also trap other aerial insects, Nyota realized. She buried her head in her hands. How could she oppose something that would end the disease that had killed her parents? But how could she be a bystander to the immoral TFEP?

A tear trickled down her face and landed on the soil, causing Nyota to glance at the ground. There she saw *Dorylus* ants, several dozen marching towards their nest, a small mound of earth almost unnoticeable. Then she remembered the reason she thought the ATDCC was having their public meeting—new research on ants.

Due to the ants living under the surface, being subjected to parasites and harmful bacteria, they had adapted to secrete anti-microbial compounds. If they could harness these compounds, Nyota realized, then it could be the key to developing a treatment for sleeping sickness. But her face fell when she remembered the wretched smell of the pesticides from earlier. Throughout time humans have been living with eyes closed, ignorant to the solutions right underneath their feet. If they viewed the insects as a solution rather than the issue, Nyota reasoned, then they could open themselves to a world of possibility. But she would have to act quickly. Programs like the TFEP and the pesticides were rapidly decreasing insect populations, and sleeping sickness wasn't getting any better. But Nyota gazed up at the early glimpses of twilight, picking up shimmers of hope among the isolated stars.