

Hades Comet

By Adair Broughton

Her black hair glistened like wet rock, her body marching to the secret rhythm of music hidden in headphones, drowning out the consistent whirring of generators some floors below. She had been on the moon base for slightly less than three weeks but already knew the layout; it's logical and precisely engineered design, the simple but sharply structured angular corridors that all fed off each other, a warren never taking long to traverse. She still preferred this form of exercise, walking wherever she could rather than being trapped in the gym, her legs pushing forward onto something solid rather than rotating in motionless circles to nowhere.

The lights were sharp and white providing an unhealthy paleness to her skin but there was less need to be wary of skin texture in this environment. She rarely encountered people on the corridors at this time, some maintenance personnel or people needing to stretch legs. She would have expected a tight knit community but the opposite had occurred. People seemingly preferred solitude undoubtedly to create as much space around them as was viable in the enclosed atmosphere of the base. 'Space' became a valuable asset. But did it have to be at the cost of friendships? There was one small common room, usually empty, even after the news that had descended upon them.

She had felt more comfortable after the first two weeks and routine gave her composure of normality but those two weeks had been difficult, adjusting to new colleagues and a loneliness she didn't expect, not even from the prior briefings of psychologists back on earth that would continually inform her of the changes she would feel. Excitement had blurred the edges of expectation. Her time had been spent reading schedules and plans, studying the health and safety protocols and being introduced to colleagues who gave her the enthusiastic welcome of indifference.

She had read all the protocols before but equipment was still being set up and she needed something to occupy her time rather than staring out of blank window at the darkness that encroached if you allowed it too. There was the mixed and strange feeling of being totally free but at the same time being trapped under ice. She could see out but never get out. There was beauty but at the same time, a detached coldness that seemed oblivious to heat. It could have been an extension of the aloofness of people, the gradual coming to terms of being in space, or something more, as yet undefined. Unfortunately, she had found that out soon enough.

The first day she could actively say she did some real work was the day they realised the threat. More specifically, she had found the anomaly. She checked and re-checked the position, recalculated and used all available databases on the base and back on earth. She had mentioned it to no one; wanting to find an error, find anything that would show she was wrong, despite the dawning realisation that its path would cross that of earth.

It was a mistake she was now regretting, not giving them the warning back home, and not even sending one email across the void to signal help. It weighed heavily; more distinct than the false gravity that still surprised her with its 'feel'.

Foresight refused to acknowledge the damage to a career that informing could bring. She could not afford a dereliction of duty, not from choice or from guilt. She had completed two more hours of tests, refused or even forgotten to eat, hence or because of a tightened stomach that was somehow surviving on the black tar of Columbian coffee. That was the legal and allowed drug of choice for any astronaut, essentially a small vice in a world of strict procedure.

Her mind stole some thoughts of what she had done to be here. She had fought hard, months of arguing and deft political and corporate manoeuvrings had finally aligned her position in what was a near impossible result of her acceptance to the station. Her geological experience had sealed the deal, a backup for any mining that would occur now or in the future; the ability to analyse data and offer a different perspective if required. For them to agree, she had been virtually forced to double her workload and revise undergraduate syllabuses all over again, study vast amounts of research on top of what she was primarily here to do.

The euphoria of that first swim in space, the weightless ride through heaven had made it worthwhile, as long as she could keep telling herself that. She knew she had nothing to worry about; it was not like space could become mundane right?

She was lucky to be here. Or so she had thought.

She gulped down some more coffee, forgetting the dull and consistent pain that ached like a bad memory at the back of her mind, somehow still enjoying the stale aroma of its cold wetness. Engrossed in plotting trajectories the time had been swallowed a lot faster than the coffee. She felt on edge when she finally arrived outside the door of the mission director. Coffee was as powerful as the future of the world.

Informing the director had meant explaining who she was. He must know she thought, have read all my details, have had the ultimate decision in bringing me here. He looked at her blankly, it was not a cold stare but nor was it welcoming or making her job any easier. Had he only reluctantly agreed for her to be here, deeming her unessential but agreeing the position as a political favour in a hidden network of corporate friendship? Was his reaction one of 'I knew this would happen if we allowed her on board'? She tried not to think of all the politics that lay behind each and everyone on this mission.

There was no easy way of explaining it. She already felt like the outsider, as if she did not have a core role and was lucky to be here. She felt some of the stares were more than men missing wives, instincts overriding protocol of behaviour. Maybe she had taken someone's place that the others had preferred. She didn't know and it felt awkward to ask, or to confront head on.

It was not as if everyone else she met talked to each other either. Now all of a sudden, she had to inform them that the whole of humanity was in for a surprise. That was, unless they already knew. A direct approach was the only option. 'I need to hit this head on' she kept saying to herself. How relevant that thought was. The very position and person that was never originally planned was now going to inform the director that earth was in the path of a comet, one that had been traversing the universe since its adolescence. It had been tracked before, deemed safe, its eccentric orbit of over one hundred thousand years having no chance of conflict with earth. Somehow the calculations had been wrong. The orbit was on for a direct hit.

She had mapped trajectories from all the data she could access. It was as if the comet had suddenly jumped, been pushed from its smooth ride, aimed directly at the crumb called earth that floated with purpose in the sun's gravity well, like a ball on a mattress, following a natural curve chiselled out of space time.

She gave him all her data, silently handing it across if she was handing over her soul.

The director stared at her, his eyes both hating the news but sparkling with the energy that had propelled him into that position in the first instance.

"I'll take it from here," his only words after moments of silence that had stretched out her heartbeat until it pounded her mind to take a breath. He looked down but just as quickly stated "Just one more thing," she heard him say bluntly as she had turned round to leave.

"How did you find this?"

"It was luck."

The director lowered his face, began to peruse the data, signalling her answer had been enough. That was her cue to leave. He was like a robot she thought, there had not been one flicker of emotion.

She had walked out, feeling the sweat that ran down her neck, and returned to her desk, almost feeling as if she had overreacted, and knowing, if anything she had understated the immediacy of this situation. She almost prayed she was wrong, earth's future only slightly more important than her own pride. She was haunted by these thoughts, these things that made her human. She didn't care if she became a mockery. Not if it meant her mistake freed the earth temporarily from its shortened future just as the nascent for exploration gathered pace.

Her hands felt empty without the notes and data she had clutched on the walk to his office. She could always print them out again. Sometimes it felt better to hold something, have a physical representation of an issue rather than encoded digits hidden in software and screen.

The surprising thing was, after the initial checks and panic, people knew there was not much they could do. They played the game of routine, so she did too. Yet she felt awkward and frustrated in that role. Something wasn't right about any of this and she had no close companions with whom she could talk to, vent frustration or corroborate ideas and findings.

Her data was checked and double-checked; the data being pulled from sources straight from earth, but not directly, as if they didn't want the earth to know about this. It was this window of opportunity she had missed. Her instincts had clocked an internal alarm that over ticked and by then it was too late.

It was even stranger that they had enforced the lockdown before informing the others. Hidden within the regulations there was mention of just such a response but they were all meant to be professionals, hence the reason they were there at the forefront of science, so why couldn't this be shared with earth? She could not send a message outside of the base. That should have been worrying people. They had a duty to tell the six billion people who walked, breathed and slept unknowingly and aimlessly below.

She wanted to trust the director but not one option available seemed to convince her that this was the correct choice of position. She could not cause trouble, not at a time like this. Her only hope was for earth to realise something was wrong, question what that could be and deduce what it was. They could sift through data downloaded; piece the jigsaw together before the big piece of rock finished its journey of probably five billion years, the remnant of a supernova that also spurned earth.

Surely those people too would begin to ask questions of the few lost angels in orbit around them. She was lucky in that she had close relatives but no family of her own. She had no children whose playful laughs and transient tears she could miss. It had surprised her that space was so full of people who had families. Maybe the mission psychologists or managers felt it gave people a reason to live, less of a chance to take risks. Space itself was still a huge risk but the knowledge of beauty that was felt when leaving orbit, the freedom of non gravity, and the perspective of the swirling blue and white globe so close yet so far, surpassed any earthly emotion or feeling. She had gambled everything on becoming one of the few in history to be liberated from the curved land below, into a dream like state of weightless abandon that meant more than life itself.

This is how she had felt but they were just words. The cold reality of the entropic universe made her cling to earth once more. Actually knowing what would happen, it changed everything. She felt the vulnerability for the whole of humanity, blind to its fate, enthralled by technology that was meaningless compared to a huge lump of rock, debris from the formation of a solar system, the vomit of a supernova that blindly followed its burrowing path of Newtonian dynamics.

Huge buildings would become irrelevant. Concrete would become dust in the wind, tombs to encase culture. She wanted to desperately stop thinking like this, to not become part of the 'sky is falling' doom mongering which became easier than confronting the problem directly. Why wasn't more ever done? She could find these comets, but without a contingency plan, what is the use of knowing?

It had always been a question of when and not if it would happen. As she walked back to her room, her eerie shadow cast from the false glow above that was barely keeping pace with her, she tried to calculate the odds of it happening right here, right now on the same day she had started her job. The odds seemed unbelievable but she knew she could say that about anything. What were the odds that every one of her ancestors from the first life form to bacteria through to parents had all survived and replicated and that in a universe of fifteen billion years she was alive right now? That it was her who first recognised the incoming doom? It all seemed too much, like a story, a film or a life that wasn't actually hers.

She had to pray for faith, but it never came. How could there not be a God when incalculable odds and coincidences would end mankind's exploration of space as soon as it had begun, essentially the very moment it had begun. Coincidence itself appeared to be the debris from fate, scar tissue of chance. The universe was teasing her, somehow. Blind, indifferent and cold chance had destroyed what was beautiful about humanity before it had a chance to flower or even seed. It was a lot to take in.

She thought of her own sacrifices, of the money other people through taxation and profiteering had provided and how humanity could benefit from this in so many ways. Now they could not even benefit from one woman's thoroughness in her work. There must be other people who will see this comet she thought, how could there not? But orbits had hidden the comet; its speed gave little warning relatively, its sudden movement changing its position was a strange anomaly that would prove deadly, like a bullet shot at the human race from only yards. We are learning all the time she thought, it is only luck that had given a human history of thousands of years. Part ape and now already part dead.

Paradoxically it was the other comets that had changed the course of evolutionary history, given the mammals a chance to adapt and develop, taking over from dinosaurs. These giant events gave life and took it away. It was change, nothing else. If it was unfair that life would possibly be taken away now, the life of the hominid, then it was unfair it was given the chance in the first place. They were as important as the mutations to DNA caused by radiation from space. Evolution was adaptation via mutation, it was luck and it was a shock too difficult to grasp.

An amateur would have more chance of finding this she knew, looking in a random place, like she had. She was testing her systems and aligning instruments not expecting to find anything. It was frustrating now; waiting with a vain and unknown hope that somebody else would do what she had done.

They would see it but too late. She dreaded to think what the state of the world would be like in those moments.

She could not scream or break down. She wanted to talk even though it could not change anything. She felt frustrated that time was ticking itself into oblivion but there was nothing to do but wait. Fifteen billion years was difficult to imagine, to formulate an understanding and yet now it was being compressed into fifteen hours but all she could do was exercise in a futile gesture that could not even momentarily distract from the future.

She remembered her college essay on time, how it was twisted and warped and shaped by energy-matter. She remembered the words of a traditionally bearded professor lost to his own analogies but still magically describing how all time exists somewhere in the universe with respect to viewpoint. You could watch the universe age and die from a black hole. Examples like that were still clear in her mind. His words were imprinted, a watermark for her career.

She had stared out of her skylight at stars that winked solely for her on that very same night. Every moment was still being observed by something in the universe because light speed was finite. She wondered how time being relative could mean she would always be alive. This event would always exist somewhere from someone's viewpoint if the technology ever allowed them to see in that way. Impossible she knew but theory suggested possibility much more than it did impossibility. Imagination itself was just a broadening of horizons. But taken as a whole, mankind was at the centre. Everything was expanding away from her, like a speck of dust on a balloon.

To know something was coming inbound to destroy all she stood for, what progress humanity had made and could so easily be destroyed, like a single pin prick, it was devastating, making everything meaningless, usurping all dreams, ripping them from the mind in a scream of silence. The naïve live better, the simple smile more.

They had known this would happen. But they had presumed they had time, that fate would not deal them this hand so early on. Earth was still insignificant, a lost soul, a single child just like she was. Earth was reaching out, beginning to feel for the first time, rewarding itself for the evolutionary gift of consciousness. Those first tentative steps would not even be repaid with the smallest of journeys. Was it really a leap, like the man had said in 1968?

It did not make her feel better, knowing the event would be lost only to those unlucky enough to observe. A melancholy absorbed her, following hidden seasons she would never experience again. She felt like the autumnal angel with no wings, to eventually be stuck in a winter of fast decline. Who would want that life?

That was the ironic thing, that she had wanted some time alone until she had actually felt so alone. She could have lived here peacefully for her whole life, but only if there was a chance she had something to go back to if desired. It was strange how the mind worked. Playing the loner was an engaging

pastime that served a purpose for a time. Time was what she didn't have and now there were no losses to cut.

Life would survive in some way. It was a brief respite, a small harbinger of hope. She had been presuming the worst but there was good detail on this comet, its size and velocity alone would account for massive destruction no matter where it hit. It was undoubtedly best to be small, some bacteria hidden in rock, timeless in its need or necessity to eventually adapt and flourish with the remaining five billion years of the sun's kind gifts of photons. Humans had no chance. Not if history was to repeat itself.

She was one of six females from a population of over three billion women on a base with over thirty males. Had she read once that someone had traced the genetic map of every European woman to one of six ancestors? She could pick out facts from books read years before, wishing she had consolidated on the statements, engaged in further research, developed a better memory, but the years of study had ingrained what was needed for tests and even that had been hard work. Everything was a thought or notion and secondary idea taken from the gifts of others research.

Knowledge was too hard to grab, exponential when trying to gain it, like the searchlight and its enlightened circumference of light increasing as the torch size increased, the light showing more and more of the unknown with each additional piece of knowledge. It was dark outside, you increase the size of the torch and the darkness only gets bigger.

The 'unsplittable' atom in the space of hundreds of years was now quantum foam and superstrings. But that was unchanging, matter neither created nor destroyed. The tragedy was people, the mind, quantum fluctuations at synaptic nerve endings or whatever consciousness actually was. Neurons could repent.

She thought of her friends, married and replicated, different choices that were examples of structured happiness. They would have no idea what hit them, not unless an amateur chanced upon the comet early, but even then it might end as a rumour dispelled by government until too late. Could they risk the population knowing about it? She had to consider those things also. No matter what she thought about that, she knew someone had to know. She had been given that option and her inactivity had cost her. What would it cost billions of others?

They could have had a day, a whole day to organise a rocket to explode it or change its course. She remembered the films No protocols had been established, no defence weaponry in space. She knew choices were limited but did that matter? Should they really not be telling them? They would see it as it neared, not believing its speed.

She thought of leaders finding bunkers while keeping the population just as blind as the base was keeping the leaders (if that was the case). Amateurs would release information; the Internet would flourish and confirm or deny the

gossip depending on who people wanted to believe. She did not want to think of the panic that it would entail.

In a way she was glad her study had kept her alone, she had the memory of a few vacant nights of male flesh inducing butterflies in her stomach, but she had needed nothing else, seeing those moments as a burden as much as charming interludes, a closed door to dreams rather than a gateway. It would have complicated her dreams.... but now, it almost felt she had lost a simple purpose of life. She knew it was programmed need, years of evolution and instinct to produce want but her own dreams had given her time, had seen the bigger picture. Now that her perspective was closing in like a kaleidoscope of changing regret, she knew she had made a mistake, hating herself for admitting it. The selfishness of those thoughts was almost shameless but what did anything really matter now? What purpose can be sought in this situation? It was brand new, she had nothing to fall back on, no similar situations that could have acted as companionship.

Her whole life had been heading towards this moment, a drive to meaning, torturous hard work but generating just enough satisfaction to reward the beginnings of the next trial. She had made it. The force of the rocket that propelled her life outwards had stretched her perspective on life beyond euphoria only to land with the let down of people. And now this had occurred. What should have been a defining moment in history was so for the wrong reason. Life itself was teetering on a death it had no knowledge of. Those that did were not warning those below that didn't.

Dreams can always become nightmares but usually at the hands of other people. It was something outside of humanities control, a reminder that nature dominated and always would. But still she felt on edge that something wasn't making sense with all this. In a way the timing just seemed too perfect, it niggled her, instinct reassuring her that comets don't just skip orbits. It appeared to be designed, calculated with precision, like a perfect game of billiards.

Nobody can move a huge piece of solar system debris like that. How had its orbit jumped? The records showed twenty years of consistency. It was just one of many similar solar system hobo's, insignificant at that time, of colossal importance now. Her own records had shown corroborating data until the afternoon of the previous day. Why did that data jump? What had gone on out there?

What was eating into her, why couldn't she accept that this had just happened, was a part of the universe? Earth was not special, was it?

It was not vanity that had propelled humanity into space. Not solely. She believed in it enough to dedicate her life to it, knew how many genuine people longed for a wider vision, to show that people could unite for grand things. Every nation had an input, from the billions in relative currency from single countries to debt relief rebates on behalf of countries that could just not afford investment but wanted their name on some small plaque residing back home

in the lobbies of the rich. Humanity could work together even if it was a ripple on a much bigger pond.

There were still wars, political in fighting, bombs, selling of arms, dictators, tyrants, famine but this was a step in the right direction, to get people to look outwardly rather than inwardly. It gave people a sense of security, a reason to look at the stars and not feel so intimidated. The irony tore shreds from her heart. There was no security to be found from here, no landmark to bridge some hidden gap to eternity. Security was in not knowing, that was all she knew.

The moon base was the first stage in a settlement drive designed to expand as well as keep safe the cultural heritage of humanity. It was the primary library, its digital shelves archiving the human race, even if some of the books were still living. They had planned one for mars and gradually stretch out humanities reaches like a vine spreading over a brick wall.

It had originally been called DNABase, mostly shortened to D-nab, the idea that knowledge of DNA, humans and other animals would be stored somewhere, a blueprint for the future, a photograph before evolution directed other alternatives. Those in the present felt themselves at the forefront as if it was a pinnacle when reality showed life to be liquid, always changing and flowing, flooding and splashing and even drying up. She had nothing against the idea, a little desire for immortality as much as everyone else. It became something much bigger very quickly. The base was a stepping-stone for Mars.

Humanity had borders, man made as well as those that were limiting due to the burden of physics and cost. Discovery was the biggest border of all, a huge leap for mankind in the small step of a few words many years before. The flight of that particular eagle had been majestic. It was right at that time. It now seemed a long time ago.

Time had passed, interest had been lost then regained and ideas were formulated while all the time the reasons for space travel had been two pronged; of hubris and progress. Those with discerning foresight had always held the arrogant in check. Understanding the value of expanding horizons was as valuable as love even if it was not as important on a daily basis. But not everyone had seemed to understand that. She had wanted purity; to know other people's reasons and it seemed one of the main ones had been of resources for the future. The mission was a prospectus.

As stated the base was a stepping-stone but it was also the beginning of corporate yield that would swamp any international governmental innocence. From mars to other moons, some saw the solar system as a supermarket of minerals, profit in mining meteors, even moons and planets. That was not necessarily a bad thing in itself. Expansion needs foundation. The one thing humanity did have, was a wide-ranging vision, fed by promise and science fiction. It also had greed that fuelled itself on need and sometimes there was a difficulty in understanding which fed which. The mind could look to the future, a great asset to have, like the squirrels storing nuts for the future. But what

was unique about humanity was how far it could look. They did not have to play with seasons or moments. It was aeons.

Would that uniqueness be wiped out forever? The brain, a three pound lump of matter, light enough to be held in the hand, the product of billions of years of adaptation and change for a species to recognise itself and live and contemplate the whole of the universe that surrounds it. How could the universe afford to lose that? But they were not special, not if life was about existence as much as contemplation. Mankind made it special, anthropomorphic arrogance that placed itself at a mysterious pinnacle of evolution that itself only existed in the mind. Humans were one point in time, one species of billions, two minutes to midnight on the clock face of life. Intelligence was their virtue, like sonar was the fitness of purpose for bats. It was a trait, a characteristic and nothing more.

Life could exist elsewhere, it had appeared to start very quickly after the formation of the solar system, but there were many more possibilities on the genetic landscape than man, itself just walking upright through that unmapped world of near infinite possibility. Yet for all that, it appeared there were also many more ways of being dead than alive.

Many had been cynical and called it 'base' or other disparaging monikers. Committed people and government as well as private projects pushed the idea from meeting rooms to space. The Lunar Reconnaissance Orbiter (LRO) of 2008 for the moon had obtained such high quality data that only a few weeks after its completion a site for the base had already been earmarked. Together with the 'Moonrise' mission of 2010, (scheduled for 2009, only delayed by one year), it also appeared that the moon contained roughly one million tons of helium 3, a valuable non-polluting fusion fuel. This in itself was use as bait for funding. The moon was less made of cheese than carrots. The international agencies, on behalf of governments not wanting to be seen to directly fund projects with no guarantee of success, were exceptional at finding private funding.

It grew and developed and more ideas were discussed, argued, ignored, absorbed and acted upon. There would always be cynics, some arguing the money spent could help reduce famine or would be better earmarked for curing AIDS, still a huge ongoing problem, one of many. It was a true remark but not a complete one. It did make sense to protect humanity and civilisations achievements if possible. The archived data included digital representations of most paintings in all the major museums, of symphonies and books and it became a popular reason, helping to alleviate tensions that billions of pounds or dollars or euros could produce because people in some ways were archiving achievement.

She felt there was no need for that kind of tension, that one was not related to the other, that the backbone of the mission was now private money, even though the innocence and passion had not yet been strangled.

What would any of this be worth without anyone to look at it? The vastness of space rendered meaningless the interstellar travel to other worlds as unrealistic and as yet not required. But as in 1969, it would be a small step; one of the things humanity did best.

She had believed in the longevity of it, past the initial sceptics because of cost and limits in resources to build these bases, even past the heartfelt cries for aid. It was a slow process and now one that seemed to be ending far too suddenly to be natural. The word shame didn't do it any justice. It was earth shattering.

She hated the name it was given, digits that were like the nomenclature for a piece of moon rock in a museum. She knew of a better name, one she kept to herself; Hades Comet. It would certainly be carrying the souls of the dead across the river of space. She would keep that apposite moniker to herself.

How had they managed to avoid seeing it until it was so close? She could almost feel the energy of it hurtling toward the earth, blind to its fate. There had been a moral imperative to broaden horizon, expand out for security of culture and people. She had felt there would be a discovery of the ubiquity of life on Mars, under the Martian soil, just like on earth. This base was one step nearer to walking on that soil.

The last few weeks had all been summarised on the difficult walk back to her room, her thoughts now congealed into despair, missed opportunity and sadness. She had needed this exercise, the movement. It had not cleared her mind.

She reached her room; the cool chill of hard working air conditioners had kept the small diamonds of sweat away from her but she still needed a shower.

The warm water flowed over her, a temporary respite from agonies that centred in her mind. Water was such a precious commodity in some parts of the world, yet here on the moon, she could shower freely, a choice of temperature. Little things like this made no sense to her. She closed her mind as best she could, try to let the thoughts cascade away like the water. It was no use, she felt stagnant.

She lay in bed, her thoughts adrift with memories of home. Sleep was adult innocence, where time could rest, the soft ticking of clocks and of heartbeat, the sound and movement that pushed time onwards, now temporarily held at bay by closing eyes. It was dark, but she closed her eyes for the faint colours and swirls preferable to vague glints of metallic wall. Sleep was not welcoming her with soft caress and peace like it did back home. The crisp white sheets and cold walls exaggerated the incessant background whirring of the generators. That noise could have so easily have been a lullaby to help her sleep, like rain drumming its jealousy to those inside a tent or the relaxed breathing of a loved one close enough for touch of smooth skin and warmth, exhales of tenderness and the soothing unspoken knowledge of security that

was imbibed like a mystery osmosis, embraced with tangled limbs. She had never truly experienced that but she missed it.

Tiredness had no respect for thought and she lay with the world on her mind, herself a world away.

The engines marched, whirred, and drank the lubrication that should have kept them quiet. Why were they so noisy? Man and women were on the moon, living and breathing and yet power could not be made silent, like the hidden and soundless electricity swimming through cable. It wasn't really the noise that was keeping her awake, that was an excuse. It was inaction that played its tricks on the mind. She was drowning in helplessness, dragging her thoughts and stretching them into knots she could not undo. There was nothing sharp for her to cut that Gordian knot, and now no reprieve from noise that tightened and burrowed into her soul. It felt like everything was entering, nothing leaving; noise, fate, nightmares and the other people that seemed indifferent to the lockdown. These were people with families she thought; yet they were not screaming to be back at home with wives, husbands and children. They were strong people. Were they too strong?

Rising abruptly but with nowhere to really go, she paced around the room. She imagined the small window as an eye watching her, the inky blackness and infinity swallowing any hope of escape.

Her feet were out of step with the army of noise she could not escape from, leaving only the shadow of a past behind. She suddenly stopped, looked towards the window, and had sensed someone looking in. It was a face, yet no one could survive out there without a space suit. The seconds passed and recognition calmed the racing heart, the beats momentarily as loud as the engines. There had been no one. She was on edge. The strong girl, who was not scared of decisions, who did not believe in God, wanted to sit on the bed and cry. There had been nothing there except a trick of the mind, another nail in the coffin of the moon base.

She sat on the small bed and watched a tear slowly drop and splash delicately on her almost clear but teasing, inappropriate nightdress, as if even the tear was too tired to relate to this manufactured gravity. The tear was significant because its last ancestor had been released over ten years earlier. The psychologists would be proud of me, she thought. In this universe, where things only matter if time isn't considered as a steady progression or size is irrelevant because of scale, it should have made a bigger splash. The last tear was one of freedom, shed for the beginning of a dream. This one fell for despair, was a solitary statement of her life, the end maybe of that same dream.

She did not know what was best; to be asleep and unknowing at home or to be here, arguably safe but with the knowledge of an uncertain future of six, nearly seven billion people. She could feel the burden only as a detachment, unreal and less suffocating than expected. She could try tears for one person but how do you cry for seven billion? It was possible to drown in a pond, a

lake or the sea. She had lost her perspective, the mind incapable of imaging so many faces. She was not even a drop in the ocean.

The lost girl had found the stars because of an uncle who had lit a cancer stick in her parents back garden one Christmas. The smoke held its position, denoting the calm of the night and creating ghosts from the satisfaction of exhale. The pale glow of the half moon delighted hands and faces that braved the cold as they rubbed them together for a little warmth.

She watched her uncle, tall and gaunt, the sort of person who looks like they don't eat but will live forever. His hooked nose and small mouth made him into an exotic creature she was fascinated by. He looked like no other relative, more a turtle or eagle or even horse. This was not a cruel observation. In his unique way she knew he could charm people and even appear attractive. Despite this she noticed him mostly on his own, the other guests not wanting his company. He was terse and abrupt but never rude and she could see the difference even if they couldn't. She thought him honest. It is possible to see some things as a child and not understand them. This was probably why she wanted his company, he seemed more genuine and dishevelled than the rest, as if content was more important than context.

His faith in what he saw and the rigidity and complete confidence in which he had held onto his flawed understanding had made an impression that lasted until this day. She always looked for the North Star since then, her link to that conversation. She had never known why it was so important till then.

It still made her smile when she found out he had pointed to the wrong star. It seemed a small detail compared to his enthusiasm. She had never corrected him, not even when she had completed her Astronomy degree and a family wedding put them back in that same garden. He had too much faith and belief in his own words. She didn't want to embarrass him, it would make the intervening years a lie and she could not bring herself, even politely, to make him aware of his mistake. How many other people who spoke with authority while keeping their sincerity had got things wrong? She had realised later on blind acceptance was not the future. Not everything was set in stone, not everyone who thought they were right could even be right.

"The future is happening right now, it's out there coming towards us. It's a blind destiny. There is no if, just a when. Think of those things on a path towards us. Ah, actually don't think about it at all."

Her memory was clear, as if she was looking at the sublimation of yesterday. He sucked hard on the cigarette its embers a deep red of heat, glowing like the lights on the rear of a truck spraying up sand on a deserted dusty highway at night, something you follow, a friend in a stranger, temporarily sharing the same path, lonely but heading to somewhere better. She watched him and had no need to reply, soaking in the words. It had all seemed so serious but if that was true why had it been kept quiet, or no other people seem to care? She did not know.

She had no idea what he had meant. Had he meant Aliens? Only now could she come to some sort of understanding. He had meant a comet. He had known about 'Hades comet' as they all had, just not that particular one. Even then it had been out there rushing toward them.

Yet it hadn't, she had seen its trajectory jump; this was what caused her opinion that something had happened. Back then it was following its orbit, just as freely as she passed her days in school, sticking to routine like gravity. But he had warned her, told her and it had not been to frighten her. It had been in the back of everyone's mind. He was the seed that had pushed her into her career even if she only realised that now. Chance was playing its part again, she felt like she was not in control, that no matter how much she had worked and made decisions, that the path was the only one available to her. It felt odd, was against her judgement and sense. For a brief moment she felt like Plato, that truth was eternal and nothing could improve on that, that it had been 'her' destiny to find this thing.

She fell asleep with the image of smoke rising slowly from red embers. A cigarette or the earth in less than a day she could not tell.

Only a few hours had passed and the cooling fans had been successful enough for her to shiver awake. It had been a restless sleep, images rather than dreams had flashed before her, and colours had floated passed that had no form, ethereal and weak and now she felt more restless than tired. One thing she knew was that she could not fall asleep. Hours were left and she could not sense the panic in the base, no anxiety filtering through the air conditioning, as it should have been.

As far as she knew the lockdown meant a moratorium of communication outside which also meant she had no real details on so how could bypass the system. She wanted to do the right thing, follow procedure, be calm but she could not remove niggles of doubt that acted as demons to haunt her and eat away at her sleep so that she had to do something else.

The channels were blocked on incoming frequencies because she had noticed the data stream had been stopped minutes before an official announcement from the intercoms about the lockdown. This had been a few hours after she had informed the director, showing the speed with which the base operated in its higher echelons.

Her mind wondered. Nobody had even brought a telescope to the base, which seemed unbelievable to her now. Space exploration was first experienced with the telescope. There was not even a telescope as a symbol in this base. It felt like a bad omen somehow, that mankind had forgotten its roots and deserved what was happening. She wanted to see that beautiful sphere of life and history, both so large and so small. There were no people from this distance, just the swirls of white that littered the green and brown and blue. She wanted contact, to be held. She needed comfort and could not see where that would come from. She wanted to see earth in its daily activities, people

walking to work, carefree or stressed, fat or thin. Everyone was special, played a part, belonged.

Her thoughts, caressed by guilt, however myopic, knew she had to connect to earth somehow. Why had she left this so late, when she had been given opportunity so much earlier, as soon as she had known? Disbelief, as well as fear of being wrong and the consequences of that, had cost time. Adrenalin allowed no tears as she was motivated by the basic value of life. She needed to do something, start a fire, speak to someone, and break into a machine to send warnings. She seemed devoid of idea of how to actually do this and hated herself for wasting so much time earlier when options were one button away. She put her head in her hands. Communication fed the world but when it mattered she was starved.

The buzz of the intercom slammed into her thoughts and she jumped like a naughty child. Good job they can't see me she thought. The voice asked to go to her desk. It was the Director's voice. She looked at the intercom for a few minutes, knowing this was what she had wanted to do anyway. A lot of wasted minutes were adding up and she was guilty of inaction once again.

Despite the reluctance and strange hatred she was feeling when she noticed the director in her chair something changed within her when she saw his face as he turned round to greet her. He was less calm, as if disturbed by an answer he could not get but knew was there. It was a big change, as if he was too calm before and too agitated now.

He wasted no time on preliminaries.

"I studied your data as soon as you gave it to me. The lockdown was on my authorisation as a precaution to stop panic here and on earth, just in case. I have to admit I thought it would be lifted, that the comet you mentioned would merely have been an aberration of data, and even if found to be true, precision programming of trajectory and orbits would show a near miss rather than a direct hit. You would be surprised how many near misses have occurred without public knowledge. Well, you probably do know but that's by the by. I am as perplexed as you are as to why something could suddenly switch position and course like that. I want your thoughts"

She wanted to tell him he could have had her thoughts a while ago but it made sense he had done the lockdown even if it hurt that he had not trusted her prior constant checking and validation of the data.

"What do you mean my thoughts?" she replied, not with disdain but also without emotion.

"I'm talking about the possibility of this all, how it has happened, and its significance I guess." He sat patiently now, his eyes showing he was interested and intrigued but also hiding concern. She saw a sadness that he did not know he had. She took a deep breath and spoke.

“Well, looking at the data, as you have, it happened suddenly. The only assumption I can come up with is that another comet has hit it in such a way that its trajectory began to head into our own orbit. Earth not the moon that is. I guess it could be some kind of seismic activity but from all my years of study and knowledge I can’t guarantee the viability of that because of its structure, its substance and I did a quick calculation and nothing less than a nuclear bomb could have displaced the momentum in that manner. There is no way all our other data was wrong for so many years. It has definitely jumped and that is something I have never seen. Do you want my other thoughts?”

“Not at the moment. You will tell me soon enough I am sure. I want you to see something first because it will probably change everything.” He handed her a photo, one of many on his desk, ones she had not seen before.

“Where did you get this?” She would not normally have spoken like that, or be as abrupt but if people were hiding things from her she had to stand firm, become authoritative.

She looked down at the photograph. She knew instantly what it was, even though some of the colour had been enhanced. It was a blurred image of the comet, somehow staring back at her. It was hard to feel hatred at an inanimate object and she had to forcefully dismiss this rock as having a spirit that could mock. This is how Gods are created she thought. It was a way of people expressing anger at drought or flood or societies failings when they could not grasp anything tangible but had feelings that were real and solid. It gave things an importance that could be acted upon if only by a wish or a prayer. She had renamed it; as far as she knew, had been the first to notice it and its relevance. This was now personal.

He informed her. “I took over emergency control of one of the Chinese telescope ‘Dragon Eye 3’ purchased after the Democratic Insurgency (of 2014). They sold off their assets, including this scope, which was placed in high orbit following their first moon landing. They needed as much money as they could get. It was one of my first acquisitions because it gave us another angle for studying weather on Mars if one of the rovers or the sensors on the planet were down. We needed something global. So yesterday and with a few tweaks we took back control when we did the lockdown and were lucky enough to get these pictures. What is unusual about the photo?”

His question was sudden, like a test sprung by a teacher and once again she had panicked, a small unrecognisable shiver as if touched by one of her fantasies, a delicate floating butterfly testing its wings in her stomach more because she wanted to impress than fear of being wrong. But something about him was providing the aura that he held her in respect, was genuine in his interest of her answers and she liked that. For the smallest time her body focussed on herself rather than the world.

She was soothing him somehow with her presence. It felt incongruous in the midst of something as big as this to begin to think about something as small

as her and how there was an atmosphere between them that she didn't want to disappear.

She dismissed her thoughts, challenging them to stop surprising her. It felt selfish but in a way deserved, as if the spirit of humanity was contained in it. With the greatest adversity ever to face them there was still time to feel. A deep breath helped, one that could have been confused for the exhale of deep thought although the real reason was mixed. She had laid her thoughts bare and she felt vulnerable. She wanted his arms to fold round her, hold her close and tell her everything was ok.

She concentrated on the picture again, feeling a glow to her skin, her cheekbones. She wiped her brow, something she never did, had only ever seen men do to wipe away sweat or difficult thoughts. It was not a sign of relief but would take away from the sudden introspection of how she looked.

She could see what looked like a metal box; something square attached to the meteor but common sense was attacking her desire to say that out loud. The image was just too blurred to ascertain with anything other than a good possibility of it being real. It could be a trick of the eye, some rock that just looked square in the blurry image taken by the camera on the telescope. There was nothing else she could see that was unusual in the rock. It was dark, against a dark background and anything light had been exaggerated with the photo manipulation software she guessed was used. This was why the metallic object was standing out.

She knew she was hesitating and so unconvincingly she spoke, feeling silly as she said it. She looked up at him as she did so, saw the intensity of his gaze and matched it with her own. She watched him look at her chest as she finished the deep exhale but it was because his eyes had also diverted from her own as if they both had a sudden shyness. It made no sense in this situation and she couldn't hold that thought as real.

She finally spoke. "There is something unnatural about it. I can see an object that looks unnatural, a huge metallic box. Even with the blurred image it looks manufactured, with edges too straight to be chiselled from its silent journey through space or from redesign after being hit by other space debris. Is this the best clarity of photo?"

"Unfortunately it is, mainly because this thing is getting too close. We would have had better pictures days ago. The velocity is surprising us too."

He explained the additional information he had, which was not much. She stored all the information and delved deep in her mind, trying to find something significant, a clue or any idea how it was possible a metal box could be attached to a comet that had mysteriously changed orbit to aim straight for earth.

“Has anyone checked if there are any minor changes in its orbit?” She did not know why she asked the question. She wanted to refuse the thoughts behind it.

“Actually we have, but we never suggested that so soon after discussion so I guess it would have been sensible to have you there. I can only apologise for that. I made a mistake.” He looked a little forlorn, disappointed in himself.

He paused, and glanced at her to see if he could read her thoughts. She made no external expression so he continued, “the data shows nothing, no change.”

“A perfect shot then” she mumbled under her breath.

“Sorry?”

She dismissed his question, not wanting to be drawn into a line of reasoning that seemed to far-fetched to be real. But how strange, she thought. It may be the only explanation.

The director then did something that surprised her. He corroborated her thoughts.

“We believe this isn’t natural, that the object is a controlling device that has somehow changed the orbit of that comet. This is why I authorised the continued concealment of this base, this lockdown. It was a safety precaution at first, protocol ‘red10’ but the importance of what this means cannot be stressed enough. If this is a deliberate attack on earth, hiding behind something natural like a comet, who is to say it hasn’t happened before or will again. These comets are devastating, will wipe out species, including our own. We know and you know by the size of this thing what will happen when it hits.”

He looked at her. She stared back. There was empathy between them, a shared burden, and the weight of a world plus two lost souls. She looked down again, stared at the coloured image in her hand as if something new would appear in the picture. She heard his voice again.

“This still sounds crazy to me but we have to be open to possibility. SETI is still in its infancy; there has been no sign of any life elsewhere in our galaxy let alone the universe. All that data had found nothing but its sphere was tiny compared to the one hundred and twenty-five billion each containing roughly the same amount of stars. Planets were out there, thousands had been ‘found’, their influence causing small perturbations and wobbles in stars. We have to act on what we know and what we can see. If there are species in space with technology like this they could well be reading signals. The lockdown might spare us some time. We don’t know if anyone is watching or has technology that can listen or watch earth. We know nothing.”

“What about earth?”

“In what way?”

“Do they know?” She needed to ask that question.

“Yes they know. Of course they know. We informed and we shut down. You thought we hadn’t told them?”

Recognition hit his face with the vague hint of smile, an upturn of the lips in reconciliation.

She felt relief wash over her like the cool rain she missed from back home. How could she have thought they hadn’t? She knew it was because communication had been poor and the man had only given her one sentence before the lockdown had taken place, almost immediately after her visit and informing report. She had felt a darkness swamp her then, a loneliness that kept infringing on common sense and a sadness that she could even have believed the earth would not have been informed.

“I don’t know what they can do within such short notice though.” He looked away his voice sounding weak, his thoughts maybe on home and a family or children playing insouciantly in the garden.

She felt the waves of guilt again. “I....I, maybe I could have...”

“No. It would have made no difference. You had to check. I understand that. We are not dealing with the right timescales.”

He moved towards her slightly, a subtle motion of his arms as if he wanted to reach out but never.

The brief respite of relief felt was soon lost to the realism of knowing the population would still not know. She had asked him if the people in charge on earth would have informed the population. He did not know. The lockdown had been enforced in seconds.

The director explained to her that these comets could have been set up to fire in random timescales over millions of years, essentially to stop intelligence forming, wiping out any species that may reach technological levels. It was pure speculation and she thought that could not be the case as there would be records of past civilisations.

“Not necessarily”, he said. “They could have been established near any planet that could harbour life and it was only by chance that earth itself is on its first ‘intelligent’ species.”

“Don’t you find it odd that this has happened on the very first mission of D-Base though? It just seems too perfect, the timing, like we are being watched. And if that is the case they would know about the base and our lockdown is essentially irrelevant.”

“We just don’t know” but she could see he felt as she did.

They spoke for a long time about how funding was spent fighting wars for resources, of establishing democracies stolen from tyrants so resources could be ‘legally’ sold. He spoke of his family and how his commitments to this job had made him drift apart from his wife until they were only friends. He spoke of his children and she realised she had not been wrong when she thought of them playing freely on swings in a back garden of green, lush grass.

“It feels wrong just to sit here and talk,” she said. “We need to be doing something. What will happen if it’s just this station left? How do we know something won’t break away from the main comet and be directed to us.”

He began just listening to her questions until eventually she stopped saying her thoughts out loud. They sat in silence but even that became uncomfortable. Whatever bonding she had felt before had passed. He made no more gestures to get closer to her.

She had no energy left to feel angry. Acceptance should not be this easy she thought.

“I’m going to lie down,” she said.

The director just looked at her, his eyes now blank, faceless like the meteor.

She lay on her bed.

There was not much time now. It felt like an anti-climax but she was so drained of emotion she felt like an empty shell as if there was no meaning left in the world. She would rather be on earth, no matter what the experience. If there were a future here what would it be like?

She thought of how badly she had needed the Director to hold her just a short while before, for comfort but also to make her feel like a woman, for something beautiful and real to come from something so immensely horrific and sad.

There was an emptiness but without the desire or need to be filled. She was barren. The earth will survive in some way.

Not even the end of the world could bring people together she thought as she heard a knock on her door.