

TOM SWIFT and the Cometary Reclamation

BY
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&
Thomas Hudson

Book two in the trilogy that began with
Tom Swift and His Space Battering Ram

A Joint
Levesque Publishing Empire/Thackery Fox & Assoc.
Publication

Made in The United States on America

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Tom Swift and the Cometary Reclamation

By Leo L. Levesque and Thomas Hudson

After Tom saves the world from the rouge comet meant to wreck havoc on the Earth, the Swifts work along with Harlan Ames, recently elevated to head of the former Master's lunar colony, to see what the situation might now be. They find it an uneasy standoff between the Elite colonists and the Cordillera work people. The Elite want to continue to treat them as slaves and to have no status in the domes. They outnumber the CPA by a ratio of 10,000 : 200. But they do all the manual labor that the Elite with their *superior intelligence* won't touch.

At the same time California has reached a tipping point. The population had grown so large that they outstrip all natural resources. Water, vital to all life, is in such short supply that the Governor must make a decision to order supplies shut off except to emergency locations and the farming industry.

While speeding back to Earth, Tom hatches a plan to put his newest technology into action, but finds that getting things from point A to point B may be impossible unless he can do the impossible.

And that just might mean the salvation of the new Lunar colony as well!

This book is dedicated to the plucky few who dare to reach for the unreachable star. Or, to see themselves in a position in the future to make a fantastic advance in humanity. As mankind discusses how to get to Mars, these few already have it in their heads they will be the first ones to go. We wish you well, we wish you safe passage, and we hope you achieve what you hope to do.



The huge object was shedding debris at a ton per minute, but Tom knew it was so massive this could go on for a thousand more years.

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Tom Swift and the Cometary Reclamation

FOREWORD — Tom Hudson

This book, as you probably have figured out, is the second in the short series (could it be called a *miniseries*?) of books that Leo Levesque and I have written together.

Book one, *Tom Swift and His Space Battering Ram*, came out fast and furious with each of us handling one of the two major story lines. Then we took turns bridging each other's work into a single book.

I believe we did a good job. It seems that we did. I've had people ask if I wrote it all and just put a second name on it.

No. I did not! Leo exists and I will swear to that.

While our visions of the universe of Tom Swift may differ on a few details, Leo and I have a love for the characters and a respect for the situations they can be placed in. That means that we approach how the story is created in enough of a similar manner to make it appear as if the work is coming from one mind and at least two hands.

Trust me when I tell you, hand my over heart, there really are two of us living in about the most opposite sides of the country as possible with Leo in Rhode Island and my own self in Oregon. We pass things back and forth electronically because to do it any other way might seem to be counter to the way things in Tom's world should work.

Will there be more dual efforts after this? I hope so.

Now for a little warning: This and the first book are not your old fashioned, peaches and cream Tom Swift stories. They are grittier and feature more action... and deaths. I just want you to know that. They are not *for adults only*, but use caution in readers under the age of about 14.

Thomas Hudson

Tom Swift and the Cometary Reclamation

FOREWORD — Leo Levesque

This novel is about a year overdue. Even though I wrote the outline for it way back then, at least three other books got in the way. Working with Tom is a pleasure and I've looked forward to doing it again.

We both feel that this book is going to be fun and highly intense. It's not going to be for the faint in heart. Too many lives are at stake and the balance of two worlds hang on the outcome.

Once more Tom Swift has to do the impossible. And, once more, not everyone wants him to succeed.

Leo L. Levesque

Tom Swift and the Cometary Reclamation

Chapter One: A Terrible Situation

The ancient comet was nearing the end of its life. Where it once had traversed the solar system and beyond in a seemingly never-ending loop nearly immune to the cosmic and gravitational forces of the various planets and the G-type star—as determined by the beings inhabiting the third planet out—it had recently been captured, waylaid if that is a possible description, and turned into a weapon.

It had no consciousness so it could not know any of this, but regardless, it had been turned away by a few determined inhabitants of that blue planet and flung with some force toward the center of the star.

Nothing would move it off its death path now. For nearly a year as measured by the rotation of the third planet it had been picking up speed, ever heading to the star.

It had been spewing everything on its surface into a huge tail behind itself. Now passing inside the orbit of the smallest and nearest of the star's planets, that tail reached back all the way to the orbit of the second planet.

Thirty tons per second were being vaporized and ripped from its own rather weak gravitational pull to stream back and away in one of the most spectacular sights ever to be witness by man.

Or anything for that matter.

Nearly all the millennia-old ice was gone along with millions of pounds of metals. Now, its solid core of nickel and carbon was glowing. The surface flowing like liquid.

It had eleven days, nine hours, twenty-six minutes and a few

seconds to go before it exploded and disappeared inside the approaching star where it would make no more effect than a single raindrop does in a very large lake.

* * *

TOM SWIFT left his house for work at Swift Enterprises—the four-mile-square research and industrial complex outside of Shopton, New York—a few minutes before eight after having slept in an extra hour. He had spent several hours around midnight glued to the monitor of his home-located SuperSight telescope.

Capable of enhancing an already super high definition visual input to the point where something seven miles away could be viewed as if it were only twenty feet away, Tom had a smaller version built for his own private use and had mounted it under a clear tomasite bubble on top of the house where he and his young wife, Bashalli, lived. Although he could have recorded the images from space to view later, he preferred to watch as it happened. Minus, of course, the time required for the images to travel all the way to Earth.

The comet was nearly gone now, less than a third of what it had been when his “mules,” officially known as Space Battering Rams, had grabbed onto it with their Attractatrons and muscled it away from its collision course with the Earth. Their unbreakable grip and powerful drives had made it relatively easy to swing it onto a new course, one that would see it skirt the Earth and Moon by half a million miles and from there on a nearly direct line into the Sun.

That, however, was what held his attention the previous night. What he now wanted to do was get back behind his desk and get things organized.

Along with finalizing notes and getting everything documented and archived from the SBR episode, a goodly portion of the previous few months had been spent in trying to find and rescue his Chief of Security, Harlan Ames.

Using one of the evacuation balls from the Outpost in Space, Harlan had tried to drop, unseen, into the lair of a pair of unknown megalomaniacs to find out what in the world they had set up in the mountains of the Philippines. But, his capsule had crash-landed, he had been captured, and spirited away up to the Moon where thousands of slave laborers and a few hundred elitists had built and were maintaining a giant colony from which the insane brother

and sister hoped to dominate the Earth.

On several trips into space Tom and his crews had just missed seeing signals or stray lights on the backside surface of our own satellite.

Harlan had eventually been rescued, the brother perished near the asteroid belt, and the female of the would-be rulers had been lost in space when her small rocket had run out of fuel.

Like the comet, it had come under the influence of the Sun and was presumed to be on a death spiral inward.

Tom waived at the gate guard, Davey, and took a slight turn to his left heading for the parking lot beside the Administration building. He walked quickly to the side door and took the two flights of stairs upward. The main corridor featured side walking areas as well as a two-way ride-walk belt that could be stepped onto and off from at any point. It stretched the entire eight-hundred feet of the building.

Tom chose to walk along the side and soon reached the large indented area that was the outer office of Munford Trent, the secretary who worked for his father, Damon Swift, and Tom guarding the front of the shared office both men used.

“Good morning, Tom,” Trent greeted him.

“Morning, Trent,” the young inventor answered back. He knew the man preferred to use only his last name in all work situations. “Is dad in?”

With a nod, Trent looked quickly at the imposing wood door to the office. “He is, but he has been on and off the phone with some folks from Washington D.C. Go on in, but I’d tiptoe if I were you.”

Grinning, Tom walked to the door, turned the solid brass knob and pushed it a few inches inward. He ducked his head in, reached his right hand back in a thumbs-up signal and disappeared inside.

Damon Swift, a man who, if not for his graying hair and laugh line wrinkles, might be thought to be Tom’s older brother, was sitting in one of the overstuffed leather chairs surrounding the conference table to the left of the large and heavy door. He was concentrating on the large image floating over the table. It was a 3-D projection courtesy of one of Tom’s amazing Telejector units.

On it was the face and shoulders of Senator Peter Quintana, who was not only the senior politician from New Mexico—and a friend of the Swifts—he was the ranking member of at least seven Congressional committees that all had some impact on the Swifts and their companies.

“That’s really all there is to say, Damon. From the federal perspective, we have to be hands off on this. Oh. Hello, Tom,” he said obviously seeing Tom slide into view of the camera pickup.

“Hello, Senator Quintana. No need to recap. I’ll just have Dad give me the details.”

“Good. Anyway, as I was telling Damon, I’m not sure anything can be done about the situation, but I wanted you both to in the picture on this. It’s nasty, nasty stuff, but we brought it on ourselves.” He gave out a very big sigh as he looked down at his wrist. “Got to run. Later!”

With that, the image blanked out.

Mr. Swift craned his head around and looked at his son. “Good morning, Tom. Come have a seat and I’ll let you know what Pete was just telling me.”

The younger inventor came around the end of the conference area and took the seat next to his father.

“Well, for one, the call was not him demanding or even suggesting we do anything. That came earlier from that annoying female Congressperson from Utah. It was, as he intimated at the end, just a heads up one.”

“Okay,” Tom said slowly, “but what’s behind the calls? What are we getting a heads up for?”

“California. Well, more specifically, their fifth year of drought conditions. What it is doing to their entire central valley and the death of all those crops, and more to the point, what their Governor Adams is about to announce.”

“What’s that?” came the simple question.

“They are already under a water emergency declaration. With a statewide population where eighty percent of the people live in the southern twenty percent of the state, and their water resources mostly located in the northern thirty percent, or coming from out of state, he is about to shut off water to Los Angeles and the surrounding cities and towns.”

“What?” Tom asked, alarmed and jumping to his feet.

“Sit down, Son. I misspoke. He intends to shut off all but emergency supplies at least one day out of each five in a rolling schedule. So, for example, Torrence might have rationed water Monday through Thursday, but they go without on Friday. Then they get it Saturday through Tuesday and off again on Wednesday.”

Tom had retaken his seat and now was looking at the table and nodding. It was evident to Damon that he was thinking this news over.

When Tom looked back up, he asked, “Will that save much water, or will people be selfish and spend the day before their off days hoarding water?”

“Good question, but Governor Adams evidently has a response to that. Any city whose population drains more water on the days prior to a shut off day will see their overall rations cut. And, people who are caught using too much water will be fined and subject to extra days of no water.”

Tom shook his head. “That would be impossible to monitor unless every man, woman and child were turned into a snitch. Kind of like the old Soviet Union.”

Damon snorted and said, “Right. Fink on a friend and get special privileges. No. Of course you’re right. It will be an impossibility unless he intends to turn neighbor against neighbor.”

They discussed possibilities for nearly a half hour before Damon said he had an appointment upstairs with the Enterprises’ Legal department.

“Tell Jackson Rimmer I said hello,” Tom requested.

Rimmer, the senior counsel for all the Swift companies, was a rare combination of fun-loving and deadly serious. He could turn any emotion on and off at will when dealing with things of a legal nature. It made him a terrible opponent in any courtroom. Fortunately, he was as effective over the phone and on video conferences as he was in person, so he helped the Swift companies avoid all but the strongest of lawsuits.

Even at that, his record was intact with no losses.

Some people referred to him as “Perry Mason Rimmer,” although never to his face.

As Damon left the office, a dark-haired young man, almost exactly Tom’s age, stepped inside.

“Hey, skipper. What’s up?” he asked as he hopped over the back of the chair Damon had been sitting it.

“There’s a bit of trouble out in your old home state,” Tom replied.

“The water thing?”

Tom nodded. “Yes. Have your folks or grandmother mentioned how they are faring in all this?”

“Not a lot,” Bud told his best friend—and brother-in-law from his marriage to Tom’s sister, Sandy. “Mom says she’s doing lots of hand washing of dad’s shirts and their underwear in a tub on the back porch. She claims she only uses about two gallons of fresh water to do something like a dozen shirts or a week’s worth of underwear. Dad says they smell a little but that’s better than how some people smell these days.”

Tom understood the dynamics of washing machines and of rinsing soap out of fabrics. He was astonished at the low usage Bud mentioned.

“How does she manage that?”

With a smile, Bud told him, “She makes her own laundry soap that rinses out really easily. The best I can describe it is that she uses a bit of bar soap that gets grated up into boiling water, then she adds something called washing soda and borax and then a lot more water. Calls it her ‘washing goop,’ ‘cause it is all thick and sort of curdles. But, using something like a tablespoon of that in the wash water and just letting things soak a half hour seems to work. Then she uses a little vinegar in the rinse water and that is supposed to pull out anything soapy left in the fibers.”

“So, does she use the washing machine at all?”

“Nope. Just the dryer. And then, only after midnight to save energy. They’re both becoming incredibly green!”

After a few more moments of talking about the flyer’s family—Bud was one of Swift Enterprises’ top test pilots—he asked, “How did they let this get so bad?”

Sadly, the inventor shook his head. “Through a deadly combination of misuse, loss through ancient pipe systems, and greed. Couple that with the global warming we’ve been in for a long time and toss in uncontrolled population growth. Everything has come together in a perfect storm of things that continue to get out of hand.”

“I suppose they can’t just tell people to stop moving into the state, or builders to stop building or growers to stop growing crops.”

“Well, yes and no. About fifteen years ago the State had the opportunity to put the brakes on the influx of people. But, they chose to ignore the future implications. Strong business forces directed the politicians to keep voting against any such measures because of the impact it would have on the construction industry. That, plus every new home and family means more tax dollars coming in.”

“Now, we’re seeing that didn’t quite work out.”

“No, Bud. It didn’t and mostly because the population centers aren’t where the resources like water are located. And, they weren’t willing to invest in infrastructure to get water to where it is needed.”

“Or, finish those desalination plants they started and never completed.”

It was a sad fact that the state had dug itself into a hole that now threatened to bury the majority of its residents.

“Why?”

Tom looked at Bud trying to decipher what the question meant. Finally, he had to ask, “Why, what?”

“Well, why do people always seem to flock to places they should never live in? Like Las Vegas or Phoenix or Los Angeles? Or, Alaska?”

Tom gave a rueful chuckle. “I think if someone could come up with a good answer to that, they should win a Nobel Prize.”

Over the rest of the day Tom pulled up, made notes on, and organized all the data and designs that went into the Attractatron mules, his Space Battering Rams. Then, he made a few notes regarding what he had found or wanted to locate in and near to the asteroid belt stretching between the orbits of Mars and Jupiter.

He had found something that excited him greatly and would become a future project. Of all the pieces of asteroidal matter he had the time to study out there, he discovered that for every eleven pieces all having a similar mineral and chemical structure, he also located one—usually smaller—piece with an entirely different makeup.

In his mind this said one thing: the theory that the belt

had once been either a fully formed or nearly formed planet that had been hit by a large incoming object could be true. It was an exciting discovery that he hoped to investigate within the next few months.

That evening, Tom and Bashalli arrived home at almost the same time; she came home from her job at the Shopton Advertising Agency where she managed the creative team. Getting out of her little sports car she ran to Tom and flung herself into his arms.

Many kisses were exchanged before Tom picked her up and began heading for the front door. Before getting there she release him and grabbed his right hand.

“You seem to have something on your mind, Tom, but I first have to get dinner going.”

With a nod and grin he unlocked the door with his little electronic fob. As the bolt slid back with a resounding *click* he turned the handle and pushed the door open. “After you, Bash!”

While she busied herself in the kitchen, Tom turned on the television and the international news channel. He was just in time to hear the commentator saying, “And, the governor of California is coming to the podium. Let’s go, now, to our reporter in Sacramento. Rocky Stokes? It’s over to you.”

“Thank you, Colt. The governor called this press event yesterday but had to postpone it until now. Here he is...”

The picture swung to the left and zoomed in to a slightly balding but distinguished man. He looked at the assembled crowd as he set several sheets of paper on the podium.

“Good afternoon, people of the great state of California and everyone looking in. As the news media has more than thoroughly covered, complete with so-called experts who have never contacted us to see if their facts are correct,” and he looked a little disgusted at this, “let me tell you that we do have a water shortage—a very serious water shortage—in the state of California. As of one week from today it officially will reach the point of no return. We either make immediate and substantive changes in the way we live and comport ourselves, or we will perish.”

There was a loud muttering from the assembled crowd of reporters, and one woman called out a question that put the

governor's sanity in question.

"Please remove that individual," he directed his security people. "I will not accept being either questioned before I finish or contradicted." He waited while the woman was taken by her elbows and led out of the large room. The muttering died out quickly.

"Now. This state is responsible for producing nearly fifteen percent of all the food grown in our nation. It is because of California's contribution that national food costs are not sky high. If we had to import all of what we grow, our economists tell me food costs to the average household would soar nearly thirty-five percent. Overnight."

He pointedly ignored the dozens of hands that shot into the air as reporters sought to be the first to ask him their questions.

"And so, it is incumbent on me, on the office of the Governor of the State of California, and on all the politicians of this state to hammer a stake in the ground right this very minute. As of tomorrow, no further water will be drained from Lake Shasta in Northern California to be used by the southern third of the state. What it still contains will be used in the Central Valley for crops and livestock."

The crowd was muttering again. This was incredible news.

"Starting today we must go on total water rationing throughout the state."

Again, a forest of hands filled the air above the crowd. He made a "put them down" motion and most dropped.

He explained his new four days on and one day off plan. "It will henceforth be a criminal offense to steal or hoard water. Everyone must keep containers and you may take and store what you are allowed per person per day against the dry days, but each municipality will have to shut down all supplies—drinking water as well as fire hydrants—for those twenty-four hour periods.

"If we don't all make the sacrifice, we may all either be dead within one hundred days or will have abandoned the state to become the newest *American dustbowl!*"

Chapter Two: The Visitation

THE next morning, Bud was sitting in the large office when Tom arrived.

“Hey, skipper. Guess you heard the Gov and his ‘shut it off’ speech.”

“Yeah. I did,” Tom told him as he reached over to turn on his computer’s monitor. “What’s on your mind?”

Bud scowled. “Well, Sandy asked me a question I can’t answer. I hope you can. Isn’t it true that those folks in Harlan’s place on the Moon live on a whole lot less water than we do down here?”

Tom nodded. “Sure. In fact, according to Harlan they average just three gallons per person per day. That’s a tenth of what so-called water saving people use.”

“Okay. How do they do it?”

Tom laughed. “They have something we don’t have down here, Bud. Well, a couple things. Those two insaniacs that set things up in the first place were in complete control of everything. Water, food, shelter. They knew they could support the ten-thousand inhabitants only if they could manage to keep water tightly controlled. Now those two are out of the picture, so it’s a matter of resources. They have to recycle more than ninety-nine point three percent of all water because there is only a small amount of subsurface permafrost within their range of harvesting.”

“Oh. I figured it was something like that. Well, gotta go call the missus and tell her. Thanks!”

Bud left the office and a contemplative inventor.

* * *

Later that day both father and son were finishing up their monthly reports, getting ready to go home, when the office door silently opened and a tall, broad-shouldered man stepped in. His dark hair was starting to show signs of graying along the temples. But his face was strong and his eyes twinkled in the light.

Coughing slightly he waited for their reaction. Both men simultaneously turned from their work in a somewhat defensive manner.

"Whoa there, guys," the man at the door spoke up with a laugh. "Didn't mean to spook both of you."

"Harlan Ames, you old turncoat," Damon answered back as he stood up and reached out his hand to welcome his old friend and former Security Director of Swift Enterprises.

Tom stood up as well and added, "Didn't expect to see you back here for several more weeks. What brings you down so early?" The young inventor knew there had to be a good reason. A trip down from the colony on the dark side of the moon is not an every day event even for its director.

"Got a few problems that I hope you won't mind helping me with." He looked at both of them hopefully.

"Harlan, you know we'll always be here for you. Come, lets get comfortable," Damon pointed to the corner set of chairs. Once settled in, Harlan went into his explanation.

"I have two major problems, and something to show you." He checked to see if there was interest in their faces.

Both Swifts nodded for him to go on.

"The first one I don't think you can do anything about. It's that Major-General and his small contingent of troops the U.N. saddled us with that are supposed to be observing the running of Shangri-La."

Damon looked at him quizzically.

Harlan added, "This general's mandate seems to be to take over the colony to use it as some sort of higher ground and to try to control space travel. When the U.N. declared high earth orbit and beyond free of government ownership, the military branch of that organization took exception to it, but could not do anything about at the time."

"But, things changed?" Tom inquired.

"Now they think they can do something and they are stepping up to the plate. They want their own space force to regulate the colony... actually to run it as their own private concern using the lunar colony as their base of operations. With the ability to dig in up there, who could stop them? They will be position to take over all space travel, especially your outpost and spacecraft, my friends."

"Do you know this to be a fact, Harlan?" Tom asked somewhat displeased at hearing the news.

"Well, at least it's what the Major-General is telling the

old Elite colonist to drum up support for his agenda. It's the same old drum beat the Masters used, and some are willing to give it another try. I don't believe they understand what dealing with this devil will mean in the end."

"Well, Harlan, I'll need to get back to you on that one. Senator Quintana should be able to get to the bottom of this," Damon stated in a determined tone.

The Lunar director nodded his thanks.

"Tom, this next one's up your ally. We are running out of water. As a matter of fact we can only survive another four months at the present population level. In three months we may have to start bringing people back to Earth. And when we reach a certain point of moving people out we will have to totally shut down."

Tom looked at his father and grimaced. "When it rains, it pours."

"If only it *would* rain, we would not have two situations like this," Damon retorted.

Harlan looked at both of them like they were speaking a foreign language. The Swifts quickly caught Harlan up on California's water troubles.

"What's happening to the water at the colony, Harlan?" Tom asked. "I thought all of it was recycled?"

"Most is, Tom, but there is always a small loss. Somewhere there is a leak in our supply storage. Shoddy workmanship or some ground shift and out it goes. And then a reservoir that the Masters planned to build in the nearby mountains was never completed or filled. They seem to have come to their unfortunate end before they finished that part of the project. The worst of it is that no one can say how they were going to fill it with water. I can't find any paper or computer files on that. I assume they were going to use their asteroid mover somehow to do it."

"Yeah," Tom said more to himself. "They possibly were going to. But, I don't see how they could control the descent of a water-laden asteroid to the lunar surface, and then take all in impurities and cosmic radiation out of it. I would think they would have to do that in deep space or at least in lunar orbit. There would be no way of decontaminating the whole reservoir. Or, perhaps they found away."

"Surprisingly, we do have the facilities to do that," Ames

said.

“Oh,”

"But, there is a slight additional glitch." Harlan waited a moment before he continued. "I went and looked at the reservoir pit in the mountains to the east of the colony they built before I came to see you. The total volume is tremendous. Imagine a laboratory beaker with an extra wide mouth opening for its shape, but this one is a quarter mile in diameter by a half mile deep right in the center of a mountain that overlooks the colony. The inside walls are smooth and highly polished.

"The rim has a deep groove all around it as if something was going to be placed in it. I think a dome cover of some kind, or something to seal it once the water was dropped in."

When Tom asked how the water would have been transferred to the colony, Harlan could only shrug.

"The floor has some deep cracks in it. I was told they were not there when the drilling, blasting and rock removal was going on. That they appeared weeks after that part of the project was completed. So that needs to be looked at. If we are ever to use it, it's also going to need to be made watertight." Harlan sighed and shook his head.

"With all the accomplishments that the Masters did, they also did some very sloppy work, and it's showing up as time goes by. To date this is their worst work. Maybe it was because they were not there most of the time overseeing it. Maybe they just abandoned it once they saw how bad it was. I don't know."

Tom and Damon could only shrug. There was a lot they still did not know or understand about the former rulers of the secret Moon colony.

"They did spread themselves a little thin that last few months what with trying to control the asteroids, take on you Swifts, build their last two domes to bring up the last of their people. Still can't figure why they started to rush things. They had it all under control until they began to bump heads with you."

"Well, Harlan," Tom spoke up, "I'm sort of glad they did. We could be looking down a loaded barrel with asteroids aimed at us right now instead of a simple water problem."

Harlan had to laugh at that one. "Simple? For whom?"

"I'll tell you what, Harlan," Damon said. "Tom and I were going to see if we could help out California and this seems like a related problem. If we come up with a solution for them we can certainly try to apply it towards you as well."

"Can't ask for anything more. I just hope it's fast enough to save the colony and get rid of the UN. Otherwise they'll just walk in and do as they please. God help us if the Major-General is in charge of it all. He's a page right out of the same book as the Master's were."

"Okay, Harlan, you said you have something to show us? But, it's getting late, so how would like to come home for dinner with us. Afterwards we can go to my study and look at it."

"Well I was hoping that Tom could see it also. The bottom line is I need a Telejector for the show-and-tell, but I guess we can continue this tomorrow morning. I shouldn't have barged in like this." Harlan looked somewhat downcast.

"Harlan, Tom and Bashalli are both coming to dinner. Anne and Bashalli have been exchanging recipes, and the results are amazing, and to tell the truth some things are *intriguing* to say the least. They would both be delighted to have you eat with us. What do you say. A home-made meal and then we can see what you have. I do have a small Telejector unit at home. How's that?"

"Damon, how can I refuse an offer like that!"

* * *

Following an incredible meal, the three men had settled in Damon's study. Harlan had taken a black Telejector memory cube out of his briefcase and held at ready to insert into the input receptacle of the display unit. He looked first from father to son and back to the cube in his hand.

"Tom, I must warn you that this will not be pleasant. But there is no way to sugar coat it. I could just show it to your father, but I don't think it's the right thing to do."

"Harlan, if it concerns the wellbeing of Swift Enterprise and my family, then I must see it. That includes you." Tom spoke softly as he stared at the black cube. Damon said nothing, he just waited. He knew that if Harlan was so secretive about what was in the cube, then it must be seen.

"I have been looking for the lost *Samurai Warrior* spaceship of the Masters ever since I took over directorship

of the colony, but to no avail. I don't know if you know this Damon, but your Mercury probe did find it as they accidentally passed within several thousand miles of each other. The probe had made a swing around the planet and was heading back to the Outpost to be refitted for its next run, at the same time the Empress' ship was heading toward the sun for a fiery death.

"I had asked Commander Horton to keep it under wraps for now, and not tell anyone till I had a chance to investigate. He agreed since there was nothing to tell but the basic sighting."

Harlan looked boldly at Damon. "If you think I overstepped my authority on this after you see the video I'll take all the blame; don't hold it against Ken. He was trusting me as the old head of Security down here and my personal interest in what had happened to the Empress.

"I sent a high-G probe manned with one of Tom's automaton robots as its pilot. The single photo that Damon's probe transmitted showed marked changes in the *Samurai's* exterior, and that showed how it was falling *back* toward the sun. Someone was alive in there for a good length of time. But, there was no way that the crew had food for the eight months it took to reach anywhere near Earth. By back tracking the trajectory of the ship I determined it passed within five hundred thousands miles from Earth."

"When?" Damon inquired.

"About four months ago. That means the crew had to survive eight months just to make it that far."

"Did the ship have a large crew? I don't recall it being reported as being very big," Tom stated.

"The *Warrior* was maned by the Empress and two others that we know of. The amount of supplies they carried? We don't know. The Empress took off so fast in her attempt to help her brother by following Tom out to the asteroid belt that she was not thinking of the time and distance involved. By all calculations they never made it past Mars, never mind anywhere close to the asteroid belt." Harlan was deliberately delaying showing them what was on the cube. All this back history was known to them.

"Twelve hours from solar destruction the probe came within visual contact and went into its programmed mode. Being that close to the Sun the interference was too great to

maintain radio contact so the humanoid robot had to act on its own. It did its job well and made it back with this cube. It spent a total of four hours on the *Samurai Warrior* before it left the ship to continue its death plunge.

"What the robot and probe brought back to the Outpost and into my waiting hands no one will ever see in its entirety. I have destroyed the original and what you will see so only a snippet of it. A five minute run through. And if I can help it no one else will ever know or see it." Harlan was visible shaking now, something neither of the Swifts had seen before in all the years that they had known him.

Damon got onto his feet, walked over to a cabinet and opened it. He poured something into a small glass and handed it to Harlan. The director of the lunar colony swallowed it without even looking at it. He closed his eyes for a moment and he stopped shaking.

"Thanks." Harlan snapped the cube into place and turned the machine on.

A 3-D image formed before them and they were viewing the *Samurai Warrior* as if they were actually there. They could see that eight of the twelve attack missiles they knew that the ship carried were still strapped to the exterior of the ship. It was obvious the racks had been hastily welded into place. The other four missiles were missing from their launch rails.

They slowly drifted around the ship's exterior, and finally cycled through the hatch into the interior of the ship. The action jumped forward to a point where the robot was already inside, and they could only see what the robot's twin shoulder lights illuminated. That was highly contrasted—almost black and white in nature with a horrible slash of red thrown in here and there. The interior was a shambles. Most major equipment was smashed and parts were missing from many of them.

The small cargo bay featured the worst electro- and mechanical-cannibalism. It had been used as a work area. Whatever was in the way that was not needed had been torn out.

The single emergency E-Vac ball was missing, and that was the most telling item.

But the worst was to come a few seconds later. The Empress had two male crew members with her, and their

remains were found in several garbage bags. Mostly bones and guts, everything edible was gone! Tongue, heart, liver, even their blood. The butchering took place right on the work bench in the cargo bay. The knives and saws were still caked with dry blood and meat scraps.

The ship's kitchen was empty of all foods; no water was found anywhere. All useable air tanks and independent power units were gone, as well as the ship's one microwave oven and food cold storage unit.

When the visuals of the remains of the crew had started to be seen Tom rushed from the room. He did not return. Damon sat though it all, white face and visibly shaken.

Damon and Harlan destroyed the video cube immediately after it was finished. They smashed it into pieces right in the fireplace and then lit a fire and melted the plastic and electronics in it. Within twenty minutes it never existed, except in nightmares. With that done they went out to find Tom.

He was sitting on the top step of the back porch. He got up when the two men came out.

"Sorry, Dad... Harlan. I just could not watch that. You really think she could do that and be still human?"

"Tom, she's still human. But what kind of life she had where she could do such things is beyond me. Wanting to live is one thing, but murder and cannibalism is another thing altogether." Mr. Swift pulled his son into his arms and held him.

Tom pulled away after a moment. "No one is ever to know of this. Right?" Tom looked from his father to Harlan.

"That, Tom, has already been taken care of. The cube is gone forever. We saw to that." Tom's father assured him.

"Do you think that Empress Shangri-La survived her madcap scheme to reach Earth, Harlan?" Tom wanted to know.

"That, my young friend, I'm going to find out." Harlan's voice sounded determine.

"By your figures, she has been here for four mouths and we haven't heard from her. Her face has been all over the news, yet no one has seen her that we know of. Her striking albino appearance would have made her noticeable. I hope she's dead." Damon declared.

"So what are you going to do, Harlan?" Tom asked. "Now that we've seen this, we know to step up our scrutiny. Are you going back to Shangri-La?"

"No, Tom, I'm not. What I need is for Phil Radnor to send a few of his friends up to Shangri-La and throw the U.N. out before it's too late. Can you arrange their transportation. And just let Saclolo and Magadia, who are running the place in my absence, and the Cordillera Mountain people know that you're looking after them. They'll trust you."

"What," Damon inquired, "will you do?"

"I'm going to track down all the information I found out about the Masters and check it to see if any of it is true. Something in their past will lead me to where she is now."

"So you truly believe she is alive?" Damon asked.

"Oh, yeah, she's alive. She hates too much to let a little murder in outer space and time rob her of her revenge. I only hope I find her first before she strikes. And, strike she will. So be prepared, my friends, be prepared."

Chapter Three: And, Away We Go!

TOM and Bud spent the better part of Monday of the following week working at Fearing Island to outfit the *Challenger* with everything the Security team might need for an extended stay on the lunar surface.

This included loading into the hangar on the lower level four of his latest people moving machines. Unlike the repelatron donkeys from his first ever visit to the Moon—somewhat unstable platforms riding on a single small repelatron—Tom had been perfecting something that looked more like an Earthbound motor scooter than anything else. While still repelatron-powered, they were meant for only one or two people riding while sitting down.

Bud had tried one out before discovering that under Earth's gravity the vehicles could only manage about eight miles per hour and ride barely above the surface of the tarmac. But, he had to admit that Tom had warned him they were designed for the lunar surface.

Two small repelatrons aimed downward and were controlled by gyroscopes, adjusting their aim thirty times a second; it was a practical impossibility to tip one over or fall off unless you jumped. On each side as well as the front and back were smaller repelatron emitters aimed at an angle downward and out from the scooter to provide motion, steering and additional stability.

While he had used a variation on these before, Tom had only recently decided to add Attractatron capability. After numerous simulations he believed a forward-facing dish worked best. The rider could keep a good eye on things and could raise or lower the load—up to one ton on Earth and six or more on the Moon—by as much as twenty degrees making visibility a non-issue.

Bud, in his habit to do so, had early on given them the nickname, *Moon Hogs*.

Watching his best friend now, the flyer had to admit, “Those *Straddlers* are quite a thing of beauty, Tom.”

The inventor whipped around. “Wait. What did you just call them?”

Bud blushed a little. “Well, I got to thinking that calling

them any sort of porcine name was doing both them, and that famous brand of motorcycle, a disservice. So, and since you really *do* straddle them, I changed it.” He looked hopefully at Tom. “Umm, Sandy thinks it’s a better name, although now that I think about it, she did sort of roll her eyes. Hmmm?”

Tom laughed. “Okay. You named the first things we took up there ‘donkeys,’ then these started out as hogs, but you want to amend that. I was thinking of calling them X-L5’s in honor of that old puppet science fiction show. I suppose yours is a good as any name.”

Phil Radnor—now Chief of Security, with Harlan’s “retirement,”—assigned Gary Bradley, now the number two man in the organization, along with eleven of the younger, beefier members of the organization to the team going to the Moon.

Most were space veterans with weeks or even months of time in low and zero-G conditions. All had gone into intensive training mode for the past five days and were considered to be ready to take on the known ten members of the Major-General’s current small detail.

As Tom looked to their right, Gary could be seen driving a forklift across the tarmac carrying a stack of long boxes. The nearer he got the more Tom glanced out of the hangar door at his cargo.

He had a bad feeling about what those boxes contained.

Two minutes later the tall and muscular Security man climbed the ladder from the ground to the deck outside the hangar.

“Hey, Tom,” he said, smiling. “The team’s about an hour away from being packed and over here. It looks like you are just about ready for us,” he stated, looking around at the nearly-full hangar. Crates of rations, electronic equipment and extra clothing nearly filled every space not containing a *Straddler*.

“Great,” Tom told him. “Uhh, do I want to know what’s in those boxes?” He indicated outside the hangar with his head.

Gary turned bright red. “No,” he stated in a low voice but would say no more.

Nodding, Tom sighed inwardly. Both he and his father disliked the carrying and use of weapons nearly to the point

of hatred. But, a couple years earlier Tom had gone over his father's head when he dissected the original electric rifle his great grandfather had invented, and had built the first of the e-guns—pistol-shaped and sized weapons capable of severely stunning or even killing using a shaped electrical charge.

In the end that e-gun had saved the lives of Bud, Sandy and Tom's then girlfriend, Bashalli. Grudgingly, Mr. Swift had okayed their use by his Security forces but only on the shock-to-stun setting.

With a motion to Bud, the two young men left the hangar to allow Gary to load his cargo in peace. It also meant Tom and Bud could deny any knowledge of whatever it was the Security man felt might be necessary on the Moon.

"So, I know you're not telling me the whole story, Tom," Bud said as the two sat down in their seats at the control station of the ship. "The look in your eyes when you mentioned that the Empress had killed her minions says there's a lot more to it than just that. I promise I won't ask for more details."

Tom couldn't look his best friend in the eyes.

Seeing this, Bud softened his approach. "Listen. If it ever comes time for you to unload... trust in our friendship. I'll never judge you for what you do or do not tell me." He grinned. "Unless, that is, you come to me to say that Sandy had decided she hates me so much that she is going to have a gender change operation. *That*, I might not take very well!"

The frankness of that statement shocked Tom out of his silence. He had to grin at the silly statement.

"How about that she's leaving you for a troupe of circus acrobats?"

Bud considered this for a moment. "*That* I might understand. At least I could follow her around the country and maybe try to win her back. But, seriously, whenever the time is right, if ever—" He left the rest unsaid.

Sixty-eight minutes later a transport truck drove over from the supply depot and stopped at the foot of the ladder. Eleven men, most even larger and more muscled than Gary Bradley, jumped out. Each man was attired in skin-tight pressure pants and undershirt. These were made from a woven fabric of micro-thin tomasite and carbon fibers with alternating AluminaTitanium metallic threads.

The reason for this was two-fold. First, at least when it came to small arms, this was as good at stopping bullets as a standard-issue bullet-proof vest worn by most police forces. They allowed the wearer full range of motion and were comfortable and cool.

But there was another use for which they had originally been constructed. When a special array of mini-repelatrons tuned specifically to the metal was set in any ceiling of a space ship or even—as would soon be the case—a special habitat that would be set up on the Lunar surface to house the team, a form of apparent gravity was created.

The repelatrons exerted a slight downward push on the metal but not the wearer. Since they were, in effect, surrounding the individual, the result was an even pressure that could be adjusted from about one-quarter gravity to about ninety-percent.

Over each man's shoulder was their space suit and helmet. These, like the under clothing, were constructed from layers of the bulletproof fabric, along with tyvek, a rubberized layer that could self-seal a hole as wide as a quarter-inch in under three seconds, and a wicking layer to pull any perspiration away from the wearer. From there it was drawn, using a small negative electrical charge, into a reservoir in the backpack where it could be used to properly humidify the air being breathed.

One by one they climbed the ladder, entered the secondary hatch directly into a small air lock and the lower level corridor outside the hangar, and took the elevator up to the second, or crew deck.

Gary entered the control room with its floor-to-ceiling view window and came over to Tom.

“We’re all on board, skipper,” he announced. “The men are getting strapped in, and I ought to get the all clear signal from them in a minute or two.”

“Then, I’ll get the launch sequence started,” Tom told him. “Unless they need you down there, pop up a seat and stay here with the flyboy and me.”

Gary smiled. “Thanks. Don’t mind if I do.” He tapped a spot on the deck with his toe and a seat rose into position behind the other two.

Takeoff was, as always, smooth and silent. With the

repeletrons Tom had originally designed specifically for this wonder ship—and now saw more than twenty other uses—creating no sound, it was hard for first time flyers to believe they weren't in some sort of simulator. Looking out through the view windows was a dizzying experience for most people until they left the atmosphere, and Tom was forever grateful he had decided to set the controls facing away from them.

They picked up speed as they left the Earth's atmosphere. Twice the computers had to perform slight course variations to avoid collisions with satellites and space junk, but by the time they passed the 20,000 mile mark, it was clear and smooth traveling.

All too soon the two-hour traverse to the Moon was drawing to a close.

Gary had gone below to get into his own space suit and to check on each of his team. Tom decided to take a complete orbit around the Moon prior to landing to look for any signs of anything dangerous. He set a course to have them make a pass over the colony at an altitude of ten miles.

He secretly wanted to look for any signs of the Empress and her escape pod. It would be easier for everyone if she had perished in a crash.

He found nothing.

Bud radioed to the colony on the dark side of the lunar surface.

“Enterprises ship *Challenger* to Shangri-La. *Challenger* to Shangri-La. Do you read me?”

“We read you,” came a young-sounding but gruff voice. “What do you want?”

Bud looked at Tom. Without depressing the **SEND** button, he asked, “What do you think I should say?”

“Tell them we're on a mission at the invitation of the colony's Administrator. And, ask who they are.”

Bud did so and got an answer neither of them wanted to hear.

“This is the United Nations security detail. We are in command of this colony now. State your true business or we will be forced to fire on your ship. And, I'm guessing that if you're the Swifts, you don't have the stomach for a fight!” The voice was now that of an older man. Tom and Bud could

imagine his with an unlit cigar clamped between his teeth and a flat-top haircut.

Tom reached out and was handed the headset.

“This is Tom Swift, and I’m guessing you are Major-General whatever your name is we’ve heard so much about.” As the man on the other end was sputtering and swearing, Tom brought the ship down to within fifty feet of the surface. They were just eighteen miles from the base now and he intended to get them as close as possible before touching down.

“Now you listen here, you dumb pup!” the General was saying when Tom started to pay attention to his tirade again. “The damned Secretary General of the United Nations sent me up here to restore order and that’s what I’m damn well going to do!”

“Do you honestly believe that using the word ‘damn’ in practically every sentence makes you sound anything other than rude and un-educated?” Tom asked, hoping to provoke the man’s anger. He knew that an angry leader was a leader who made mistakes. To Bud, he whispered, “Tell Gary about this and to get ready. I made those *Straddlers* for two men but up here they can each carry three so tell him to unpack them and on my word to hug the surface but to get over there.”

Into the mic he said, “We’ve checked with the U.N. and they insist that you were never given instructions to force a takeover up here. Your duty was, and is, to keep the peace in case the original rulers or their Elite minions try to turn this back into a slave labor camp. As such, we consider you to be mutineers!”

He cut the connection, and switched to the ship’s intercom.

“Gary and team? This is Tom. That two-star general appears to have taken over and is returning the colony to a dictatorship. I’ve got no idea how heavily armed they are. All that Harlan was able to determine is that they all carry a sidearm. He never saw anything with a larger calibre than a .45.”

Bud tapped Tom on the arm. He had been reviewing the video taken on their overflight. “Look!” In the paused frame they both saw the cigar-shaped ship that must have brought the U.N. men to the Moon. It was about the size of Tom’s

own supply rockets, the ones that had built the Outpost in Space, and sat near the rim of the crater in which the colony was located.

“That’s not big enough to bring up ten people plus very much in the way of fire power,” Tom said. He called for Gary to come take a look. The Security man grinned and nodded his agreement.

Tom piloted the ship to within two miles of the colony keeping behind a ridge of hills whose only interesting feature was a dark hole close to the ridge line. It was something Tom was later to find out had been a planned reservoir for the colony that had been built inside a large nearby crater with only a single raised viewing and control room extending above the rim. But, the Masters had made a tactical mistake with that. While they constructed it to be retractable to about twenty feet below the lip of the crater, they never made it so it might move high enough to see any great distance across the surface.

Tom took full advantage of this overlooked opportunity. As tall as the *Challenger* was, it was completely hidden from sight by the colony—unless the U.N. forces had brought along some sort of camera and mile-high extension pole, which Harlan flatly denied them having.

He shut down or placed into standby all ship’s flight systems and got up from his seat.

“Come on, Bud. Let’s get our boys ready to go see what can be done.”

One level down they found everyone was ready with their helmets only needing to be swung into position and sealed. They were standing in a circle with each man checking the backpack of the man in front of him. One-by-one they gave Gary—standing in the middle of the circle—a thumbs up.

Bud tapped Tom on the shoulder and pointed at the three boxes that had obviously been retrieved from the hangar. With a mixture of dismay and trepidation, they both saw these contained stocky projectile-launching rifles. Each one had a small spherical object sticking to the end of the short barrel with another three spheres attached to mounting points along the underside.

They also saw that each man had a belt around their waists with and e-gun and more of the projectiles in three different colors.

“Okay, Gary. It’s your show but please explain the spheres,” Tom directed him.

“Skipper, I know you and your—”

Tom held up a hand to stop him. “Just what the balls are, please. We’re way beyond what anyone does or doesn’t think is appropriate.”

Gary explained that the dark gray spheres were explosive charges akin to old fashioned hand grenades, but could be launched at least 3,000 feet on the Moon. The green ones on their belts contained a wide-dispersal nerve agent that could drop a full-grown man in one second. The blue ones were what he called “Electro-bombs.”

“Those,” he told the inventor and flyer, “have a small explosive center that shoots out about two-hundred micro-filaments with barbs. Then, one heck of an electric shock goes out, knocking anything hit by a barb out of action. Equipment, people, whatever.”

Tom nodded but looked uncomfortable. “Lethal?”

“Only, from what we were told, to especially small people and those with pacemakers. It pretty much will scramble one of those. For everyone else they lose all muscle control for about twenty minutes.”

All Tom could do was to sigh. It was obvious that someone was going to have to be put out of commission in this, and it really needed to be the men of the U.N team. His only hope was that the security codes Harlan gave him still worked so there was no need to breach the colony’s outer walls. That, plus the need to only use the knock-out gas shells.

He told them to go to the hangar and get the *Straddlers*.

“Set the Attractatrons to grab onto anything with brass in case they have traditional weapons to shoot at you,” he suggested. “The main rider will have to move forward a bit to allow for the other two, and I’m afraid I never meant these to be for military action, so the third man will need to hang on tight to the man in the middle and be leaning way back, but even as large as your men are, I think the four vehicles we have will get you there.”

Gary suggested that Tom do two things.

“First, can you scoot the ship back and away from here and do a reverse orbit or at least go back over the horizon?” When Tom nodded, he continued. “Fine. Then get around

the area and come in from the opposite direction. I've got an old fashioned lightning bomb packed in the hangar. Bud can be down there to activate it and shove it off the hangar deck as you get near the other side of the big crater. Just be sure to come in at least five-hundred feet above the surface."

Everybody was offloaded and stood ready for action. Tom and Bud took the ship five miles back and made a swing around to come in from nearly 180-degrees to the Security Team.

A micro-burst radio signal told Gary the ship was about to make its pass, so Bud went down, put on his suit and opened the hangar door. The lightning bomb was basically a tiny non-radioactive nuclear device that shot out a blinding flash of light photons when detonated.

Gary and his men would have their visor filters set to obscure all light until after the flash disappeared.

The two young men closed their eyes as Bud made the call. "Three... two... and one. It's away!"

An object about the size of a beach ball dropped slowly from the ship, and with a blinding flash, the bomb went off and the attack to reclaim Shangri-La began.

Chapter Four: Trek Into Mystery

HARLAN knew and understood what he was getting into emotionally, and was prepared for it. It was the hiking up the snowy mountains and down the other sides, several times, that almost killed him. Living on the Moon for a year had reduced the strength and stamina of his body so much that in two days he had managed to get over only one small mountain and lower several ridges. He could tell he still had a long way to go but had to make it to the other side of the whole range to an old abandon hole-in-the-wall outpost. An outpost that had no reason to being where it was, yet over a hundred people had once lived there.

The nights consisted of hard, cold winds. The days were not much better, but the wind did die down a bit shortly after the coming of daylight. He did not have the luxury of choosing when he was going to travel. The need was now, so he did it when his body could.

Why, he thought one night while he ate his meager, lackluster meal, *would a man want to take his two young children to such a God-forsaken place as this. Never mind that. Why would anyone want to establish a village in such a desolate spot in the first place?* Harlan never found the answers to that one. As to why the twin's father took them there... he *would* find that out.

He had been at the trek for a week now, managing to go farther and hike longer each day. Today his satellite GPS showed he was near his destination, a long oblong shaped valley between two mountains. One side was hard pressed against a steep mountain wall, and the other side went up in giant cut out steps. The wall and steps met at the far end, completely boxing in the valley.

Before him sat snow covered fields broken apart by knee-high rock walls. At the far end stubby trees could be seen. Denuded at this time of the year, they all looked dead.

There's a great omen, he thought.

Two low stone huts, one larger than the other, could be seen in the middle of all this wasteland near the steep wall. They were all that was left after an avalanche covered the rest of the buildings in the outpost.

According to his information, the outpost once consisted

of a dozen buildings and about a hundred people. Most were still buried under tons of rock. No one from the outpost had survived. They all died, mostly in their sleep, or so the tales went. Harlan knew that fact was wrong. Two people had walked away that terrible night. Quite possibly the two who absolutely should not have.

Thin gray smoke rose from the smaller of the two buildings. Animals of some kind lingered by the side of the other. Someone was home; who, was yet to be seen.

Harlan almost made it to the door when a voice spooked him out of his skin.

"Hey mister, do you want to play?" a child-like voice asked. A figure rose from in front of a nearby rock wall, but the voice was behind what he could now see was a newly made stone-covered grave.

"Why would a child..." and she rose higher and higher. The girl... no, the woman, was close to six feet tall. In his amazement Harlan stop thinking.

She stood hooded in darkness. He could not see her face. The top of her head was covered with a very dirty looking bandage. She wore a sherpa's fur coat and fur-lined pants.

"There's no one else here," she continued as Harlan slowly walked toward the grave and to the woman behind it. He had to be sure of who she was.

"Hey-You died, and left me all by myself. Very rude of him if you ask me." She pouted as young girls do.

"Definitely not an average ten years old," Harlan muttered to himself. He notice a rag doll in her left hand, and that her right arm was not in the sleeve of her coat. That made him feel less threatened. *What could a one armed, ten year old woman do? Unless she was hiding a weapon!*

The woman skipped around the grave and went right up to him. She looked at him sweetly and even held out her doll for him to take and look at. She blinked several times in rapid succession.

Smiling, he asked the doll's name as he reached out to take it. The next thing he knew he was flying through the air and landing on his back. The woman leaped into the air and landed on him, straddling his stomach with her good arm pressing against his windpipe. She leaned forward adding her upper body weight to the good arm forcing him to stay on

the ground.

"Still want to play with your Empress, Harlan?" she asked with a light laughter. Her red eyes were blazing now, her white teeth shining in the weak light. The combination made her dirty face seem even more out of place. She released some of the pressure.

"If you knew it was me, why the little girl act?" he mostly demanded rather than asked. The Empress was still sitting on him, but now practically released his throat.

"What little girl act? I never spoke to you until just now." She shook her head in disbelief. It caused her to wince.

"If that's the way you want it," he retorted. "You can get off of me any time you like. My back is getting cold and I left my gear up at the head of the valley. Didn't know what I was getting into, so I didn't want to be encumbered."

She rolled off of him and stood up, offering her good arm to help pull him up. "Get your stuff and come inside. I was heating up some yak stew; I'll just add to it."

It was almost an hour later that Harlan opened the door in stepped into the relative warmth of the hut. The Empress had her heavy coat and leggings off and hung by the door. He hurriedly did the same before his body over-reacted and shut down his body heat. A lantern was lit and sat on the one table in the room. There was no other door, and the two glassless windows were shut tight with wooding shutters. The woman, Harlan wasn't sure what to call her, was sitting on a small stool by a barely lit fire tending a pot. A sling held her injured arm against her body so it would not move. The rag doll was also sitting on the ground facing the fire.

"Are you the brave man that's going to save me?" the girl/woman asked again in her childlike voice. "Hey-You didn't know English, but at least he helped take care of me." Tears started to fill her eyes. "My head hurts again, and I can't take off the bandages. Hey-You stopped me every time I tried." The woman looked at him hopefully as she sat there sobbing a little, but never once did she stop stirring the stew.

Harlan was more perplex then ever. *What game was this girl/woman/Empress playing at?* he wondered. *This is so unreal. Next, a man will shout 'CUT' and a bunch of movie people will appear.*

He sat saying nothing for the moment, just watching what

she was doing. He slowly came to the decision that there were two people, not one, he must deal with in the same body. The head injury must have been substantial.

After a couple more minutes she picked up one of two tin bowls that she had beside her that Harlan had not seen. She spooned in some thin stew and held it out for him. He reached out and took it. It was the first time he'd noticed the pungent odor of infection coming from the girl's head. It made him wince and he wondered even more what happened to her. Did her escape pod crash, or was this done to her later? He said nothing hoping she would say something.

The woman joined him at the table and sat in the remaining chair. They ate in silence, Harlan thinking and the girl expecting nothing else, for her dead companion seldom spoke, even in his own language.

By the time supper was done the woman was half asleep—no, it seemed more like a stupor. Harlan quietly brought in his backpack he'd left outside by the door. He opened it and took out the medical kit. It was in a water proof wrapper which he rolled open. Greg Simpson, the Swift's head physician at Enterprises, had made this kit especially for Harlan. It had things in it that you would not find in a standard issue kit.

He reached for a small injector and snapped off its needle protector. Talking quietly to her he explained what he was doing as he injected her arm with a dose of morphine. She didn't even react to the shot. While waiting for the drug to take effect he placed a thermometer strip against her forehead. 103 degrees—no wonder she was out of it. She was lucky to be still alive; by tomorrow she would have been dead. Harlan knew that the odds were that she would be still dead even with his inadequate help.

Taking up a small pair of scissors and unfolding them, he slowly started to cut away the dirty head bandages. But near the side of her head a few inches above her right ear, the bandages refuse to come off. Even though green and blackish puss was leaking out, the cloth refused to bulge. It was somehow stuck to the skin.

Reaching down into his pack he took a flashlight that was mounted on a headband. He closely examined her already bald head. The putrid smell almost made him gag.

The right side of her scalp was inflamed, especially along the five inch gash that somehow part of the bandage got into, probably causing most of the infection. That was not the worst of it. What looked like a thin steel wire was protruding from her head. A quarter inch of it could still be seen sticking up.

Harlan was transfixed by the wire. It was beyond his understanding how she was still alive if that was in her brain. This had to be a new injury. No way she had survived months like this.

He knew that he had to get the cloth out first, then he could try to clean the infection. He checked her eyes to see that she were totally asleep, then took out a scalpel packed in a disinfectant. Gingerly he reopened the wound, cutting down till he reach the skull. Blood was gushing everywhere. He knew he could not stop until he got all the diseased tissue and fibers out.

Before the cloth had time to fall to the floor, Harlan had another sprayer out and he was misting the now fully open wound. The blood stop flowing almost as if by a miracle. He knew he had only a few minutes to finish. Pulling a vacuum-sealed bag from his kit, he tore it open to reveal a small suction bulb. He used it to clean out all the puss and whatever junk might still be in the cut. He then sprayed the inside and outside of the wound with a strong, broad range disinfectant and antibiotic. If he did not clean the infection totally out, all his work would be for nothing. He had no other resources to turn to. And getting outside help fast enough would not happen in this far-out region.

He was ready to glue the skin together. If he took too long a time the skin edges would just wither and never heal. The glue did two things at once; it dissolved the blood's clotting agent so natural blood flow would start, and it sealed the cut. Harlan had only one try at matching the edges together. It would still heal if the alignment was slightly off, but the scar would be very noticeable. Then again, people would barely notice a scar because they would naturally stare at the baldheaded woman instead.

His work done, Harlan wrapped her head once more with sterile gauze, using just enough to keep it covered so it would stay clean. He carefully laid her flat on the one available bed. Leaving her he found a copper bowl and added water to it and placed it on the iron grid situated above the fire. He

added a mixture of thin tree branches and dried animal manure to the fire from a bucket to heat the water.

While waiting, he made the only logical decision he could make—he must call for help. Pulling out his GPS receiver he opened it and replaced the primary transmitter frequency cube with another one stored in an auxiliary slot. There were several he could have chosen from. He closed the device and checked the water and the woman. In his mind he realized he did not want to call her “Empress Shangri-La,” for only bad things were associated with that name.

The water was hot enough for what he was going to do next, so he put off the radio call. He still needed more time to think. Time to make up his mind for sure about what he needed to do.

Taking his last clean cloth out of his pack, he wet it in the warm water and began washing her face. He was still awestruck at how beautiful she was even without any skin pigmentation.

Like a white marble bust, her long cheek bones and high forehead gave her a regal look. Her ears were small and delicate, her neck long and thin. Her bald head added to her looks, not subtracted.

As he washed her neck he could tell the rest of her had not been clean for some time. This disturbed him for he knew the Empress was fastidious about how she looked. This added to the mystery of what happened to her in the last few months.

Harlan stared at the sleeping woman. Did he dare? Was it a violation to both her body and mind? Yet, there was the need to make sure that she had no other injuries. He would start by checking her arm to see what had happened to that, then continue if need be. He decided that he was not a voyeur out for his own kicks, but a person needing to attend to her medical needs, or she could still die because of some foolish hangup on his part.

Her arm was black and blue. He could see where one of her forearm bones had broken and come through the skin. The other bone must have been broken as well for that to happen. This injure was definitely new. A week perhaps, and no more than two. That could coincide with the head injury. The rest of her body was just skin and bones. She could have been back on Earth for at least four months, so how malnourished was she when she had landed? She had to have

been close to death, and no way could she have walked away from the evacuation ball.

Harlan knew that for a fact. A year on the Moon under one-sixth gravity left him badly out of shape when he began this search. The Empress had spent a total of eight months without gravity. And with her meager food supply there was no way she could have withstood any exercise regimen.

Someone had to have seen her come down. That had to be the dead monk. Was this prearranged somehow, or was it just coincidence? Harlan had no way of guessing. He didn't even try.

Her torso and legs were relatively clean, and that added up too. It was her feet that told more of the story. He had not noticed before, but she was nearly barefoot. Only thin rags covered her feet. Both were bruised, cut and callused over. She had done a lot of walking lately without shoes. The hard rocky ground had taken a toll, but the cuts were mostly healed. That also fit in with what happened two weeks ago. More mystery. The list was getting longer.

Harlan sat on the floor, his back against the bed looking at the coals in the fire. He remained there over an hour. The woman was washed, redressed and still asleep. Her temperature was going down. A good sign that made Harlan happy. The radio was in his hands and he had still not used it. When he fell asleep two hours later he had not turned it on.

A child's voice was calling out.

"Mister, could you please move. I got to go potty. Please!" That turned into a whine. Harlan rolled out of the way and the woman threw off the covers, shot out of bed and headed out the door. There was no place to go in the hut, so he followed her to see where she went.

He needed to use the 'john' as well. She went into the other building and by the time he got there she was stepping away from the trough the animal manure was swept into to be removed later.

"You're so funny," The woman said to him as she skipped by. "Hey-You always went behind the barn right into the pile."

This girl of a woman was definitely going to be hard to get use to. Harlan pondered that thought for a moment as he did

his business.

When he got back inside the main hut she already had the fire going and was starting to make something to eat.

"You know you shouldn't let the fire go out," she scolded him. "We could freeze before you even know it."

"And how do you know that?" Harlan asked. "Have you been here that long?"

"I just know it, Mister. It's the truth. Take it or leave it. You're the one that going to wake up frozen, not me. I got a bed! You know you could have slept on Hey-You's bed roll. It's in that corner over there." She pointed to it.

"Next time I will, and thanks," he replied as he watched her pour some type of watery porridge into the two bowls.

Harlan took his and sat by the table. "What is your name? Mine's Harlan."

"Mama told me not to talk to strangers. But, since you are the only one here, and I did meet you yesterday... Maybe we're not strangers after all."

Harlan could not help but laugh at that childish logic.

"I'm Margaret Masterson St. Philips. Maggie, if you don't mind." Firmly she added, "Papa don't like it, so I do!"

Harlan almost spat out his porridge.

"I think you are a very rude man," she told him. "Papa would have disapproved. I like that. Do you think it's important to like people?"

"Maggie, it is if we're going to be friends. By the way, how long have you been here?"

The woman looked at him and then started to fidget.

"I... I can't remember!" she shouted in frustration a moment later. Now angry, she threw her bowl of porridge at him. He ducked, and by the time he was on his feet she was out the door. Harlan ran after her.

Maggie had not gone far. She was kneeling by the grave, and when Harlan walked up to her she said, "You know, Harlan," the voice of the Empress now present, "only this monk has never asked anything of me. He accepted me when I came out of the night, he never questioned a thing I did. He never turned me over to the renegades, or to the people that came here with food and other things that he needed."

"I can understand not turning you over to the renegades. But why, Empress, did people come here to take care of him?" This was making no sense to him.

"He was the last of a very old sect of monks. Monks that have guarded this place for over three thousands years. He was like a God to the people of this area."

"What was he guarding that was so important after all those years? And wasn't everybody supposed to be dead?"

"Well, you know how it is, Harlan. There's history and then there's *history*." The Empress smiled up at him, and for the first time reached up and touched the right side of her head. She winced in pain when she did. When she lowered her hand a different look was on her face.

The child-woman was back.

Maggie looked at the grave again and smiled.

"Harlan, Hey-You was a very strange man."

"How's that?" He was watching her to see if there was going to be another change.

"See that platform over there?" Maggie pointed to an eight-by-eight-foot square wooden deck sitting only a foot above the ground. It had a bucket on it. "He would spend hours every day down there."

"Oh!" that got Harlan's attention at once. He walked over to the platform and stepped up to it. Maggie followed him.

The first thing he noted was that the platform was not just a cover for a well. Instead there was a heavy trap door set in the center.

The door was three feet square and it had an iron ring in the middle of one side with an iron dead bolt just below it so that it could not be opened accidentally. *Or, from the inside!*

When he gave it a yank, it just about moved. It would not lift with ease; it took a lot for him to pull it up and flop it open.

The second thing noticed was that the bucket was tied to a thick rope. A rope that was only five feet long. That seemed to be a stupid thing. Water couldn't be that close to the surface.

Taking his flashlight out of his pocket he pointed it into the hole and looked down.

The well was dry and probably had been for the longest time. Harlan did a double take because a strong, heavy duty ladder was built right into the frame of the door making it nice and easy to climb down. In the shadows of the wall Harlan could just make out an opening in the wall. Certain that the monk would not have been spending his days sitting in the dark at the bottom of the well, he closed the trap door. That exploration needed to wait until later.

"The pain in my head is back," Maggie informed him as he dusted the dirt from his hands. "Can you stop it?" she pleaded.

"I'll try. Let's go back inside and I'll see what I can do."

Chapter Five: The Upper Hand, And How to Gain It

BY the time the blinding light faded, Gary and his men had made up all but the final three hundred meters of ground to the edge of the crater. The did not stop there.

The *Straddlers* let them soar over the edge and drop directly down to the largest exposed area of the colony near the shaft and base of the observation tower. As they touched down Gary considered that the previous controllers of this installation had been fools with zero thought or understanding of how to protect the tower.

“Come on,” he urged as he hopped off the lead vehicle, his weapon snapping up into his hands. The others did likewise as he ordered one man, Fitzgerald by name, to remain with the vehicles.

As they already knew, a large supply airlock sat at the base of the tower facing into the crater. One of his team gave a thumbs up signal as he had been entering the security code provided by Harlan. The outer hatch rolled silently to the side and the team, who had been standing to the sides, began to enter.

Obviously these U.N. jokers don't have an idea about what they need to do to secure this place, Gary thought. I didn't see anyone in that tower room and Harlan said that's where everything is controlled. Idiots!

He decided to neutralize the tower so he leaned back out of the airlock and raised his weapon.

A single shot directly upward took out a small chunk of the observation level. A huge gust of escaping air and papers and other debris shot out for more than three seconds, then dwindled to nothing. He knew from a briefing given them by Harlan Ames that the supposed Masters had built in safety measures and hatches that would automatically close off that room at the loss of pressure.

“That ought to hamper ‘em!” he said over the near field radio circuit of his suit.

A press of a button inside made the outer hatch slide back from its recess and fit into the opening, In about four seconds enough air had been released into the twenty by

twenty foot room to allow them to hear its hissing through their helmets.

“Keep those on and locked,” Gary ordered as he did a check of his weapon and inserted a fresh shell into the barrel. This time he chose one of the shock shells. This made four men ready with each type of shell.

A green light flashed three times next to the inner hatch and then went steady. All the men stepped back and away so they would not be in direct line of fire should the U.N. contingent be on the other side.

Without being ordered, two men on one side with the shock shells crouched on the floor right by the hatch and two with the sleep gas shells.

A click announced the disengagement of the locks of the hatch and it began to swiftly swing outward.

One man with a shock shell and one with a sleep shell swung their weapons around the corner prepared to fire.

But, there was no shooting at them from inside.

Cautiously, Gary pulled a small device from his belt that seemed to be a monitor attached to a gooseneck and arched the neck ninety degrees. He pushed that out around the hatch and looked at the monitor. It showed a small but high definition view of the outer room. There was little to see.

Probably running about one hundred feet deep by fifty wide, it was the staging and storage room for the airlock and anything coming inside. There were a few large containers made from some sort of plastic and storage lockers arranged around the perimeter of the room. A doorway the same basic dimensions as the hatches of the airlock could be seen on the far wall.

Gary pressed a switch on the monitor's side and was treated to an infrared picture.

With some alarm he spotted three warm bodies hiding behind one of the large cases. He made several hand motions to indicate the number and location of the potential enemy and did a three-finger countdown.

Daniel Dimmick, one of the men with the sleep shells mounted, swung his weapon around the corner, thumbed the control for a fifty-foot launch range and pulled the trigger. With a little poof of the nitrogen gas used to propel the shells, his arced out of the airlock and up only about fifteen

feet before quickly slowing and dropping precisely behind the container.

With a small flash it exploded and Gary could see on his monitor the cloud of knockout gas expanding. It soon spread throughout the room and even entered the airlock. But, it had done its duty. On the monitor Gary and the men closest to him could see the crumpled forms of the three men out there.

“Let’s give them another count of five and we’ll head out.”

A few seconds later Gary led the team out from the airlock. Their helmet visors had a built-in filter allowing them to see through the fog of gas as if it weren’t there.

They all walked in a crouch, weapons always at the ready, toward the far end of the room. As they came even with the back of the hiding place, one man stepped over and secured the three unconscious men—two were in the uniform of the United Nations Troops and one obviously a conscripted Filipino man from the former slave population.

His workman’s clothing and callused hands were a giveaway.

The Enterprise man used special zip tie arrangements that held the men’s wrists together behind them, held the ankles in a similar fashion, and then allowed feet to be pulled back and up so that they touched the fingers. The materials was so strong that not even standard bolt cutters could remove these.

Even so, Gary ordered that all three be shoved into one of the larger lockers to their right and that it be locked.

The team crab-walked to the door and, as before, lined up on either side of it. This one was, for some reason, obviously not a pressure door. *Another stupid design move*, Gary thought.

“Same as before,” he muttered over the radio, “but let’s take a little look out there before we open things. Roberts?”

Ike Roberts pulled a small device from a belly pack and placed it against the lower corner of the door. A whine could be heard outside their suits but inside nobody heard a thing as the small cutting head spun at a fantastic speed quickly forcing its way through the aluminum of the door. It flashed green and dropped from the door into Robert’s waiting hand.

Gary poked his little portable periscope through and took

a look. On the other side was a long corridor with no place for concealment. There was no heat signature on infrared and nothing visible using a filter that would show up laser-light trips for hidden weapons.

He made the decision to move out. The door was raised and they crept out in their crouched position.

It had been discovered decades earlier that a man in such a position could move at about a good walking pace and be able to drop to the ground in under half the time a person standing fully upright might. It had saved many a soldier's life.

They walked the hundred meters along to the far end and were about to settle down to repeat the drilling and checking when the doorway swung up.

All the Enterprises team immediately flattened themselves on the ground, weapons pointing at the door, fingers just touching the triggers.

But, there was nothing on the other side.

Gary looked around and spotted a small LED on one wall and, by rolling over, he spotted the receiver on the opposite one.

They had simply tripped an automatic system that most probably opened doors whenever supplies were being transferred down the corridor.

It hadn't shown up on the scan, so Gary took a moment to point the small camera on the gooseneck at the LED and pressed a button to enter it into the database. From now on the little monitor would recognize these and show them.

The men returned to their crouching and headed to both sides of the open door. Directly outside was a wall, but running in opposite directions at ninety-degree angles was another, narrower, hallway.

The little monitor showed Gary that two men were stationed behind what appeared to be upturned tables set about fifty feet down each side of the hall.

One of his men tapped him on the shoulder. Gary turned and the man pointed behind them. When Gary looked over his shoulder he smiled.

The gas from their first sleep shell was still expanding and was about to reach them. With any luck it would make the

hall, go both directions and knock out their opposition.

It was going to be a waiting game.

* * *

It was late morning by then and cold winds were beginning to swirl around them. The winds were starting early today. Harlan hoped that didn't mean a storm was coming. Maggie reached out and accepted his helping hand to get to her down from the platform, but then she pointedly dropped it and turned away from him.

He shrugged. It was going to be like this for quite some time, he told himself. Until her head injury healed—and even possibly after that—he mentally prepared himself to be dealing with two distinct personalities.

Luckily, he was starting to see the change in her eyes when either one took over. For the Empress, her eyes widened and almost blazed red with power, a power her body could not provide as a back up, where at those times the little girl came to the fore, her eyes not only softened and narrowed, they took on a plaintive look. A look like a true child who finds themselves needing to be strong, and putting on a good show, but who yearns to have an adult hold her hand and keep her from harm.

She led the way back to the building only stopping for a moment to turn and look back at the grave marker. With a small sigh, she opened the door and entered, Harlan just two steps behind.

He had to stop suddenly when she did and spun to face him. The effort made her dizzy and here eyes rolled upward showing nearly all white. As her knees began to buckle, he scooped her in his arms.

Amazingly, or not given her lack of food, she weighed nearly nothing. It was like picking up a mannequin where you think it will weigh the same as a human only to find it weighs just a fraction of that.

His unnecessary effort nearly tossed her into the air.

She opened her eyes and looked into his. At the moment he could not discern who was behind them.

Whoever it was put a small smile on her lips and snuggled her face into the side of his neck. *This must be Maggie*, he thought as he kicked the door shut behind them.

Before he got her over to her bed, she was quietly snoring. He put her down as gently as he could, not causing her to stir, and covered her with the threadbare blanket and furs she used.

Harlan Ames was feeling a mix of emotions he had never experienced. Here was a diabolical woman he might just as easily strangle as she slept for whom he was feeling a little bit protective at the moment.

He walked over to the old monk's bedroll and pulled it closer to the fire. There he sat for twenty minutes before getting to his feet, grabbing the radio, and letting himself out into the now snowing afternoon.

* * *

They patiently waited five minutes. At that point Gary's outside microphone caught the sounds of two or more people gasping and coughing. The gas had reached them. Now it was only a matter of how effective it would be in such a low concentration.

The monitor showed the results less than a minute later.

Three prone bodies and one now draped up and over the makeshift barricade to their right. None of them were moving.

Three men with weapons raised headed in each direction while the other five stayed behind with Gary. They returned two minutes later dragging their hogtied captives. Again, neither pair were just U.N. troops. One uniformed man on each side had been accompanied by another Filipino man outfitted with a rifle that looked suspiciously like the old electric rifle that the very first Tom Swift had built. These were shock weapons and could not shoot anything solid.

Gary had to consult some notes Harlan had provided. He did not want to split up his team, but neither did he want to head in the wrong direction. He scanned through the first page and found what he needed. "We head down that one," he announced pointing to their left. "The other one just goes to the water purification plant for this particular dome. We might need to go there later, but for now, follow me."

He rose to the crouch and headed through the door, turning left and picking up speed as they moved along the long hall.

Gary counted the doors as they passed several of them on

their left... only on their left. The right wall was solid.

Two, three, four doors down, and he stopped at the fifth door motioning his men to get down. This was the door leading to the elevator up to the now, hopefully, disabled control center. Unlike any of the other doors it featured a small window set about five feet up from the floor.

Up went the periscope's gooseneck and camera. On the monitor nothing could be seen other than a short hall and the elevator doors.

Again, this door was not a pressure hatch. It made the men wonder where they would find the one keeping the deadly vacuum of space out.

The door opened using an old-fashioned handle, and was soon pushed open where it seemed to click into position against the wall.

Two men crawled into the room and over to the elevator doors. Rather than a call button, there was a fingerprint pad. Gary pulled a small silicon finger from his belly pack and tossed it to one of the men. He, in turn, reached up and held it against the pad. It was a replica of Harlan's finger.

Three lights across the top blinked red, then green, and as the final one went green the doors opened revealing an empty elevator room large enough for only three or four of them. They all could now see that the outer door of the elevator was a pressure bulkhead. There must be another one above.

It had already been decided that Gary would lead a team of three men, each one with a different weapon mounted, to the upper level. The three he picked had their different shells ready, and he pulled out his e-gun. He briefly toyed with the lowest setting but thumbed the control up a notch to setting two, the one that could kill a smaller human or completely disrupt every muscle in the body of a larger one generally requiring medical attention.

This wasn't a time to play nicey nice, as Harlan had told him during their final briefing.

They entered the elevator and attempted to hug its sides, a task made difficult by the small size of the "cage" along with their backpacks.

There was a single, unmarked button inside. Gary hit it with his elbow. As soon as the doors closed, the elevator

began to rise.

He radioed his small group, "Okay. Hit the deck once the doors open just in case. Weapons ready to fire. Shock charge first."

He tapped the chest of the man carrying the weapon fitted with the blue sphere. That man nodded and double checked his gun.

While they waited for the elevator to rise the approximately two hundred feet, Gary reset his e-gun just to stun. "No use killing if we don't have to," he told himself under his breath.

All too soon for anyone's liking, the elevator stopped and the doors started to part. The air inside rushed out into the vacuum. Gary and the man with the explosive charge were pulled out and hit the ground first followed by the other two who landed on top of them. They quickly moved into a spread out orientation.

They needn't have bothered. This room was more an anteroom to an airlock into the observation and control room, and there was no sign of anyone in it even though the lights were off.

"Probably because I shot up the room beyond," Gary said in his microphone. "Let's get the elevator back down and the rest of the team up here. No, check that. I don't want us all trapped up here." He keyed the mic. "I want a second trio up here as soon as the elevator gets back down. Bob, Jonathan and Charlie. Leave your large weapons and come with e-guns charged and unlocked. Stun setting. The elevator is now on its way back down." He informed them it could be under vacuum so to stand back when the doors opened.

"Roger."

"Roger."

"We've got green lights starting. See you in a minute!" the man Gary recognized as Jonathan radioed back.

A minute later there were seven men in the outer room at the top of the tower, three at the bottom ready to defend their position if necessary and one man still standing by guarding their *Straddlers*.

Plus, of the ten original U.N. personnel, four were now out of commission.

The airlock cycled, and Gary and his team poured out into the observation room. It was a scene of total chaos!

His single shot had blown out an area larger than a filing cabinet. Anything that had not been strapped down had blown out with the exception of the three dead men who had been picked up and slammed into some equipment in the middle of the room.

With no space suits—they were attired only in their powder blue fatigue uniforms—and no breathing apparatus, they had most likely died quickly, possibly having been rendered unconscious by their instant impact with the rack.

Gary assessed the situation. They had control of the control room and at least seven of the ten U.N. men would be no further trouble to them.

“I don’t see anyone with officer’s insignia,” one of his team said. “Or, over the age of about twenty-five.”

“Damn!” Gary swore. “That means the really bad guy is still at large!”

Chapter Six: "Father..."

HARLAN stood in the swirling snow. The cold in the air quickly reaching his skin. He had forgotten his coat. He had to step back in.

"There you are!" Maggie exclaimed happily, with a big smile on her face. "My head don't hurt as much anymore," she added.

"Let me look at it again like I promised outside at the platform, and then I'll take care of the pain."

That was what seemed to set off the personality changes. Physical or emotional pain. When she was the Empress, she was too violent for him to handle out in the wilds like this. A more secure place was needed; it was definitely time to call for help. While he waited for the rescue aircraft to show up he would have a little subterranean exploring to do, *but first I must play doctor. Think only of that right now, Harlan, old boy. Lose the patient and there be no reason to go exploring down in that well.*

After he had redressed her head wound, he took out his injector of morphine. One dose left. He turned the selector to half dose and gave her the drug. Within minutes she was half asleep in her bed again.

Sleep is what she needs, Harlan thought as he watched her face.

"So serene," he sighed. "Not a worry in the world. Am I doing her justice? Should I have just let her die? Now she will have to pay for her crimes. I'm saving her now for a life of misery."

She moved slightly, an enigmatic smile on her pale lips.

Harlan, you dope, he chided himself in his head. *You know that she deserves nothing else. Did she think twice about the people she mistreated and killed? Of course not. You went after her for justice, and now's not the time to turn chicken. She asked for it. So stop being an ass. Make your call and get this over with.*

Sighing once more he started to get up, but she must have felt his movement.

"Don't go," she whispered, still half asleep, reaching out to him. Harlan took her hand in his and sat back down at her

side. "Thank you. Now the demons will stay away." Her face became calm, one eye twitched slightly, and a small smile returned to her lips.

For no reason tears formed in Harlan eyes.

A few hours later he went out into the snow to see to the animals from the other building. They had been ignored for the past few days. They needed to be let inside, out of the snow, then watered and fed. He attempted to milk the she goat, but she was so ornery that he only succeeded in getting a cup of milk. Spending summers at his grandparent's farm with their docile cows had not prepared him for mountain goats.

Before returning to the hut he made his call. The radio transmitted a signal up into space where it was received by one of the Swift's relay satellites and bounced to the Outpost. From there it was routed down to Enterprises and to Doc Simpson's emergency phone. Within a minute the medico was on the line.

"Harlan, are you all right?" The doctor was sitting on the edge of his bed. It was still a few hours before sunrise in upper New York State.

"I'm fine Doc. But I've got a patient for you. How fast can you get the medical jet to Tibet? Clear it as a Top Priority One Medical Emergency. Swift personnel evacuation, Stat status. That should get you here without interference. Tell legal eagle Jackson the same thing. If they ask you who needs evacuation tell them that it's a Harlan Gambit. They'll know to look the other way."

Doc had switched to speaker phone while Harlan talked. He was mostly dressed and putting on his shoes by the time he finished giving his instructions.

Puffing somewhat Doc asked. "I take it you found her, and that she is not healthy? Injuries and malnutrition, like I thought would be the case?"

"Yeah, that and more. There's a psychosis of some kind. You may need a straightjacket. Bring two; I may need one by the time you get here." He hoped that sounded like a joke.

"I told you, Harlan, not to go. You were too close—that it was too personal." Doc didn't want to lecture him, but he had to get him back on an even keel before he did snap.

"You never gave yourself time to unwind. To stop thinking about it. You can't make the world right by finding her. What

she has done is done. Let me bring some appropriate people with me so you can hand her over, Harlan. You've done enough."

"Thanks Doc. I get it. It's just that I hate to lose her now. We must keep this a secret. If the world finds out about her I'll never get her back to the Moon. The people up there should hand out *their* judgment. She made them suffer, they should mete out her punishment. They're the one's that paid the ultimate price." Harlan voice was cold and precise. He was fighting to control his anger.

"All right, Harlan. I'll do this for you. I just hope you're right. If you still want to take her up to Maine I'll get some supplies sent up and then I'll let everybody know that I'm taking a brief sabbatical, and I want to be left alone so that I can rest and relax for a week or two. That should give us time before anyone starts poking around after me."

"You're the best, my friend. I'll see you in a day or two. Thanks."

When Harlan stepped back into the hut the aroma of fried vegetables with small pieces of meat filled the air. Maggie was sitting by the small fire, humming to herself. A second, smaller pan sat on the edge of the wire stand.

"Maggie, that smells delicious. Who taught you to cook?" He hung up his coat as he talked, and then went to check on the table setting. She had that done also.

"Don't know. I know what to do if I just let it come." She lifted the frying pan from the fire and took it to the table. Harlan reached for the other pan, but couldn't find a handle. So he touched the top edge of the pan and found it bearable. The pan had cooked rice in it.

"This is real unexpected treat," Harlan said as they sat. He had most of his meal gone in minutes. Maggie was taking her time eating in small, delicate bites.

"Yes, it did turn out pretty good even if the prisoner had to cook her own last meal." She was watching Harlan closely. He managed to swallow his last bite. He hadn't realized that the Empress was the one sitting with him.

"Miss St. Phillips," Harlan refused to call her Empress, so he used her real name, "this is not your last meal. I won't be killing you in the night." He had unexpectedly turned angry because of what she said.

"Not you, Harlan. But when the others come to get me I'll

be dead within days, mark my words." Her eyes were bright red, almost glowing with the conviction she felt.

"No!" he spat back, letting his anger flair. "I'm not turning you over to anyone. I'm giving you a chance that you would not give anyone. There's a wire still in your head, and I going to see if that can be removed. Then we'll see what happens."

Harlan was hoping that the Empress would disappear with the removal of the wire. That, by some miracle, the wire was all that held her evil personality in place. That somehow Maggie was the true owner of the body and she would reign supreme. Then Harlan could rethink what was to happen.

"Harlan, take those rose color glasses off. With or without a wire in my head that does not excuse what my brother and I have done."

"You regret what you have done?" Harlan cut in.

"Regret almost ruling the world?" she asked and snorted. "The only regret I have is that I won't be able to kill Tom Swift for his interference. I warned my brother that playing with that man could cost us everything."

"Well, I for one am glad you did!" he threw back at her. She didn't flinch.

"So who is coming to—" she made quote marks in the air, "—to *help* me?" She was almost laughing at Harlan.

"Just Doc Simpson, and a pilots of the aircraft."

"Hmmm... Your famous Doctor Gregory Simpson. I couldn't ask for anyone better. We thought of kidnapping him when we first started our little venture, but we did not want Swift Enterprises to take notice of us. We were busy helping ourselves to all the Swifts marvelous inventions at the time." Her face lit up in amusement and delight.

"If you had?" He stood up angrily. "Then thousands of innocent people would not have suffered and died. Is that it?" He quickly turned away from her, no longer able to look at her face. The face he so much...

"Hell, I'm going insane!" he screamed to himself as he turned back to face her. Just in time, too. The Empress had stood up and had the frying pan in her hand. She was starting to swing it at him. His left arm went instantly up and his other hand formed into a fist and hit her in the jaw knocking her to the ground. She hit on the damaged side of her head.

Harlan rushed to where she had fallen and started to turn her head so she could see what damage he had done when a moan filled the air and the woman started to cry from her pain. He pulled her up into his arms and hugged her to his chest whispering, "Maggie! I'm so sorry... so sorry." He, too, started to weep.

The morning light found them both in Maggie's bed. Harlan was sitting up with his back to the stone wall and the woman cradled in his lap. Which personality he was holding did not matter; he regretted what he had done. He had never hit a woman before, at least not like that. He had fought women and thought nothing of it, but this time... and he swore never to do it again.

He had watched her face all night long after giving her the last half shot of morphine.

Maggie was the one who woke up in the morning, to Harlan's relief. Her jaw showed no signs of discoloring, and she did not complain about it. Harlan wanted to forget the incident, at least to put it out of his mind for the moment. He had a lot to do today.

After breakfast, while Maggie was doing some personal washing up, Harlan took that time to see how much it snowed during the night. The snow had not accumulated that deeply. It was powdery dry, and the light wind that was still present blew most of it away. There were small piles of it in the corners, or under things. The well, out in the open, was swept clean.

He walked to the other hut and took care of the animals. Maggie joined him just as he was finishing up. Together they went to the well and opened it.

"Care to go exploring with me?" and he pointed down the well. "I have it on good authority that something very important is down there."

Maggie looked down and frowned. "Awfully dark down there," she commented taking a step back from the hole.

Harlan smiled. "I have lights, and I really could use your help." He put on a forlorn face.

"If... you... really... need me," she hesitantly replied. But Harlan could tell she was not happy about it.

"You're the best!" Harlan smiled back. That put a big smile back on her face.

Maggie was wearing the headband flashlight with extra pads of gauze to keep it from rubbing against her injury. Harlan had the lantern from the hut. He also had a small emergency light that he kept hidden. The less that Maggie knew, the less the Empress knew. He was not sure how much information the two shared.

Harlan went down the ladder first, helping Maggie by holding her hand as she made her way down using only her good hand and arm.

The tunnel itself was hundreds of feet long, barely five feet high, three feet wide and ran as straight as an arrow. Harlan knew this was an escape route. The question was, to escape from what? He bumped his head several times as they both walked, scrunched down. At the end of the tunnel was a blank wall, but a ladder went up a shaft that was cut into the roof. It only looked to be about ten feet to the top.

Harlan was happy to poke his head into the increased head space. He stretched his back to relieve the kinks. Maggie joined him in the confined space to do likewise. Harlan felt a tingle go through out his body as she accidentally rubbed against him and her face came next to his.

"Can you pull yourself up, or do you need a hand?" he hurriedly asked before he did something he would truly regret.

"I can do it," Maggie responded, "but I won't go first." She ducked back down and out of the way. He put the lantern down first and the climb upwards was easy. He was in total darkness and he was tempted to take out his other light until Maggie called out.

"Here's my headband, catch! We'll have to leave the lantern."

Now in possession of the light, Harlan swept it quickly around.

The area was twice as long as wide. The walls were filled with niches that held what looked like parchments and stone tablets. It tapered into an arched ceiling. There was no opposite wall, only another cave that led out to somewhere.

"Harlan?" a scared voice called out to him.

"Sorry," he told her, bringing the light to shine on her. "Just checking the area first. Come on up." She started up after a moment of hesitation. It was more difficult for her to

climb this ladder than it had been to come down the other one. He had to reach cown and slowly pull her up as she stepped on each rung.

With Maggie clinging to his arm, they went to the other end of the room and out to a large circular cavern. A wide table was illuminated by the light. There were several stools around it and when Harlan played it to the far end Maggie screamed in horror.

Sitting in a large chair were the dried remains of a man. he was posed as if it was still doing something on the table.

"Father..." Harlan heard the Empress' harsh voice next to him, "so you did live for a while. I truly hope death was not kind to you." Harlan's light flashed from the mummy to Maggie's face... no, the face of the Empress. Her eyes were flaming red and her nostrils flared and dilated with each hard breath.

She grabbed the light out of Harlan's hand and went to look closer at the mummy she called "father." Gazing into his dried, parchment-like skin that had been his face she started to talk to him.

"I see that even in death you could not leave your work. Even death was beyond your notice, just as your children were. I now know that mother did not die because of some illness, but because you took her and us out to this God forsaken land and left us to rot while you gloried in this place of ancient Sanskrit writings. You never realized the irony of it all. The love and rejoicing of nature and family they spoke of through their poetry and stories. Instead you barred us from you, and turned us against everything good!" Her voice was filled with hatred and she spat into his face.

Harlan was shocked by her actions. *What had Professor St. Phillips, a noted authority of Sanskrit history and writing, done to his family? Was it more than neglect and loneliness that turned his own flesh and blood against him.*

"Harlan, you bastard, why did you bring me down here? Kill me if you must, but this... this is the worst thing you could have done to me. I hate you!" And she flung herself at him, her one good arm and hand reaching out for him. She had drop the light to do so.

Harlan had no choice but to step aside and grabbed at her as she stumbled by. He pulled her off her feet and slammed her, butt first, onto the ground. He could feel her body slump

the rest of the way down as she must have fainted. The headband slid under the table and it shown away from them, leaving them in darkness. He retrieved the light and shown it on the Empress.

She was gone!

"Damn!" was all he said as he went after her. The glow of the lantern disappeared as he looked down the adjoining room. He figured that he would catch up to her in the well. After all, she was only seconds ahead of him. And that was where he was wrong.

The Empress was able to run down the tunnel as she only had to bend down a little, while he could only take crouching steps that didn't cause his head to hit the ceiling.

I wish I were back on the Moon where this crab run comes naturally, he said to himself.

In the dried up well he had another problem. She had managed to get the cover back down and bolted the door above leaving him stranded.

It was hours later that the lifting of the trap door woke him from a fitful sleep.

"Had enough, Harlan?" the Empress asked with amusement. He was surprised she hadn't abandoned him.

"Why didn't you run away?" he asked out of curiosity once he climbed out. She could have simply left him there to die. Or until Doc Simpson found him.

"Why would I want to leave your wonderful company, Harlan?" she laughed. "Anyway I still need that wire taken out of my head. And I'd rather trust your Doc than the cutters around here. "

"And what of your imprisonment?" he looked curiously to her.

"Do you really think that I'm your prisoner? I think not. Once I recover from my injures I'll just be on my way. Without a 'thank you' or a 'do you mind.' "

Harlan stood flabbergasted. He couldn't think of a single thing to throw back at her. Instead he turned and walked to the hut. He was hungry.

The familiar sound of jet lifters woke him up late the next morning. The woman was standing by the open door watching the aircraft do a vertical landing.

"You're taking me home, Harlan?" the voice of Maggie ask as he reached her side.

"Once you tell me where home is?" It was now out in the open. How would she react to that question?

"Home..." she slowly pondered that word. "I got no home. Here was home once, not any longer."

Was Harlan mistaken about this being Maggie, and the Empress was back in control?

Tears filled her eyes and Harlan put his arm around her.

"If you want, I'll take you back with me." He didn't use the word home.

"You'll take me?" she asked in amazement.

"Love to have you," he told her softly. She was almost jumping with excitement; this, he realized, had to be Maggie. By then the main loading hatch in the underbelly of the plane was open, and it's lift was being lowered. One man stood on it, Doc Simpson.

Harlan rushed to meet him, taking Maggie with him. A firm handshake passed between them. Nothing more was needed.

Doc turned to the woman and took her offered hand. "I'm Maggie, sir, and you?" She was acting all prim and proper.

"Doc Simpson, my young lady, and it's my pleasure to meet you at last." He turned back to Harlan. "Get your things and let's fly. No use wasting time." He looked at the sky in the direction they had come from.

"Did you forget to stop and get clearance?" Harlan was almost laughing.

"Well, you did say *emergency*, didn't you?"

"Do we have five?" Harlan wanted to know.

"Red, do we have five?" Doc was talking to the plane's pilot using the ship's intercom system.

"They're not on radar... yet. I'll holler when they show up."

"Good enough, Red." Harlan replied. "And, thanks for coming for us."

"Anytime, just make this quick."

Harlan turned to Maggie and took her hand and placed it in Doc Simpson's.

"Be an angel and go with the Doc. He's going to look you

over to see if I fixed you up all right. I need to free the animals and get our stuff. I'll be back in five minutes.

"Promise?"

"Promise," and he was off running to the large hut.

Chapter Seven: Tom's Decision

TOM and Bud had moved the *Challenger* off to one side and out of direct visual sight of the lunar base's observation tower. They had no idea what was going on as standard radio silence was being observed. Only the extremely short range helmet-to-helmet communications were in use inside the base.

Because of this neither young man had any idea of progress or stumbling blocks inside the colony.

"I really wish we had a way to see what was going on," Bud stated as he sat, slumped in the copilot's seat. "It's been over an hour for crying out loud!"

Tom shook his head. "Gary has orders to immediately open a channel if they run into any real problems. In this case no news is to be considered to be a good thing. Short of us seeing an explosion I have to think things are well in hand so far."

He was satisfied at that point, but an hour later even the optimistic inventor had to admit he was getting anxious.

"Bud? I'm being an idiot," he admitted.

"Never, skipper. You're a top notch genius. What's got you saying that?"

Tom looked at his best friend, a guilty look in his eyes. "I completely forgot that they can and should be listening in on our broadcast frequency. It's just that they are not supposed to open an outgoing channel. Let's try something." He reached forward and made a few adjusting taps on the control panel before keying his headset.

"Tom to team. I know you can't answer but my guess is that Gary left a sentry with the transportation. If so, can you pop up to about one hundred feet above the crater edge?"

He decided to not repeat the message. As things were he might be placing the guard in jeopardy. The waited.

About a minute later one of the *Straddlers* zoomed up and became visible a mile away from the ship.

He keyed the mic again. "If things okay make a clockwise spin." In the observation monitor, set to bring the man and lunar scooter into sharp view, he and Bud watched and

smiled. The man spun the scooter around twice before halting.

“Great,” Tom told him. “Go back. Thanks!” He cut the open channel as the man dropped down and out of sight.

He was about to suggest Bud take a good rest when the radio crackled to life.

“G to T. G to T. We’ve taken the control room. Down to three enemy. Need repair of window; had to blow one out. Over?”

“Say team status, and is it safe to move over next to tower?”

“Status A-OK. Answer to your last, affirmative. All outside weapons, and there were not a whole bunch of ‘em, under our control.”

Tom turned to Bud and smiled. “Ready?”

“For what? Moving in and adding to the fun, or starting up Barclay’s Lunar Glazing Service. How the heck are we supposed to fix a blow out in that tower?”

“Ah, I may have forgotten to mention that we came prepared. Head down to the hangar and unpack box, uhh, I’m pretty sure it’s labeled F-7. Anyway, inside you’ll find a bolt of a light gray sticky-edged fabric. That and a pressure bottle with an odd-looking nozzle. Just get them out and I’ll be down as soon as I park this thing.”

As Bud headed across the deck to the elevator, Tom turned to his controls. A moment later the ship rose about twenty feet above the surface and began moving back toward the observation tower. He halted it just fifty feet from the edge of the crater. Setting the controls to hold it above the actual surface by five feet he also headed down to the hangar.

Bud had the case unpacked and was looking at the dingy “fabric.”

“That’s some strange feeling stuff. So, I’m guessing it’s time to spread it over the hole out there and then...” he paused with a small scowl crossing his forehead. “Then, do we spray that stuff in the bottle on it?”

Tom wiggled his eyebrows. “I’ll show you the latest in repairs in space, flyboy.”

They flipped their helmets up and over their heads, both hearing the automatic seal hiss into place and the backpack

start to supply breathable air and heat.

Outside Tom looked over the hundred or so feet to the observation room. Behind the intact view windows he could see at least four of their men moving around. One turned and waved. He stepped to the torn open area and made a “come on” motion. Tom pulled a small air gun from its mount on the railing outside the hangar. He fitted a flexible line to the small weight at the end, brought the butt up to his shoulder and made an exaggerated nod.

The man in the domed room waved and stepped back.

Tom fired.

Much more slowly than might be expected, the weight with the trailing line arced slightly over to the hole where it disappeared inside.

A few seconds later the man—Tom had to assume it was Gary Bradley as none of the suits had any insignia to identify who was inside—came back to the opening and gave a double arm wave.

“They’ve got it, Bud,” Tom announced.

Less than a minute later another signal, more like a mime of a fisherman reeling in a catch, came from the tower.

Tom had already attached the end of the line to a small winch inside the hangar that he now activated. The line grew taut and the reel stopped when the line’s pressure reached the appropriate level.

He pressed a small control button on his suit’s sleeve and the *Challenger* began to rise. It went up about thirty feet so that the new line was at a down angle.

Bud first, then Tom, clipped a carabiner onto the line and climbed onto the rail, launching themselves across the void. Bud had the fabric held in one hand while Tom clutched the canister.

They slid inside the blown out window fifty seconds later where they were greeted with back slaps and smiles behind visors.

Tuning into the near field channel Tom asked his team leader how it was going.

Gary briefed him on the situation. He ended with, “My strong suggestion, skipper, is that you and Bud head back ASAP to the ship. Leave us to do what we’re paid for. That

Major-General and his two other men could be anywhere and it could take hours or days to flush them out. Plus—” he looked meaningfully at his boss, “—it’s not going to be a safe place until we get them and any of the so-called Elite folks that still have a stomach for a fight. It might not be pretty.”

Tom agreed, but said he had to show them how to use the repair fabric and spray.

“Basically this is not going to be shape-conforming, but it will stick to the walls inside here and hold at least ten p.s.i. of air pressure. Now I’m wishing I’d asked Harlan about that. But, he might not know.”

Gary offered, “Let me call downstairs. I’m pretty certain two of the men still below have pressure meters.” A minute later they all heard the answer.

“Eight p.s.i. down here, Commander.”

Instructions finished, Tom and Bud reattached themselves to the tight line, Tom lowering the ship again to decrease the angle to nearly zero, and they started the hand-over-hand task of heading back to the ship. Luckily the lower lunar gravity made it fairly easy for the two to do.

Standing back on the hangar porch Tom looked over in time to see the new patch being stuck onto the inside walls. He’d told them to stick two pieces together at the edges and make it about fifteen percent too large so that it would puff out a little. In a minute the fabric started to take on a wet look at one edge and continued to darken the more the team sprayed the setting liquid on the inside.

Once finished Gary had orders to add air to the room, slowly. The circuit that had tripped when the explosive decompression happened was reset, and the incoming oxygen helped set the spray and made it impermeable.

The boys headed inside and up to the control room.

Shortly after that the *Challenger* rose and moved back five hundred feet. Tom set it back down; he told his friend that wanted to remain on the surface for another twenty-four hours, “Just in case!”

Over in the observation room the team members were wide-eyed. As the new patch set stiff and then unmovingly solid, it also became mostly clear.

The pressure had risen to five p.s.i. already and would be at standard pressure in three minutes.

The team waited until it was fully set before Gary keyed in an override code into the main panel, supplied by Harlan, that would keep anyone else from doing anything in the control room. After that he called Tom.

“Skipper? We need you to take our, umm, guests into custody. I’ll have them taken to the downstairs airlock.”

After that they headed back down the elevator in three groups. Once everyone was at the lower level they retraced their steps out of the elevator area and into the long hall.

Tom and Bud brought the ship to hover a few feet over the sunken base. Bud went back to the hangar and helped unload the supplies for the team along with a small inflatable habitat ball in which the prisoners would be transferred through the vacuum.

These men and bodies would be handed over to the FBI once they returned home.

Ten minutes later the ball was shoved out from the airlock and the same line used earlier was attached so it could be winched up to the hangar deck and pulled inside.

Once he had the signal from his outside man that the ship had moved away again, Gary consulted his map and pointed the way they had originally been walking.

The team moved out while Fitzgerald began the task of moving all their supplies into the airlock.

Two hours later Tom received a call from his father. He had hoped to remain on the Moon, but five minutes later, after notifying Gary of their departure, the ship rose and headed back to the Earth.

As they raced back toward the blue planet in front of them, Tom turned to say something to Bud only to find his friend in deep concentration.

“Care to share?” he inquired.

Bud slowly turned his head. “Huh? You say something, skipper?”

Tom laughed. “And here you accuse me of letting my head stray into Never-Never Land. You were definitely not right here for a few. What gives?”

Bud, who was still slumped a little in his seat, straightened up. “Well, it’s sort of silly and sort of sad, but before we left to come up here I got a phone call from my

folks. They're really worried about the water situation out in California. Here's San Francisco surrounded by water, a range of mountains close by that supply massive amounts, and they are in nearly as bad shape as the people down in the L.A. area."

"Yeah," Tom admitted, "it isn't a pretty thing going on out there, but they aren't alone. Lots of places are on the borderline. Texas and New Mexico are about to declare water emergencies even though they're no where as close to the end like California. So," he tilted his head a little and looked at Bud, "what do you want to do?"

"Do? Ummm, about what?"

Now, in spite of the seriousness of the discussion, Tom laughed. "Do about your family, dunderhead. I know its small potatoes given the overall situation, but why not have them come out here for a few months to save a little water. Perhaps by then I can come up with a miracle idea."

He noticed Bud was shaking his head. "No room at the Barclay Inn," he stated. "We're only a two bedroom establishment, and I can't leave Granny out there."

"Ah," Tom said holding up his right index finger, "but there *is* room up the hill!"

He meant the housing development that had once been started by an industrial spy in hopes of planting a network of people and devices to steal secrets from Swift Enterprises. When the plot had been uncovered, and several of the spy houses had mysteriously—or not so mysteriously—been torched, the Federal Government had declared the entire tract and all surrounding property to be under federal protection.

Although the mystery of who was really behind that neighborhood had never been solved, Tom secretly believed it was the Emperor and Empress in their ongoing attempts to steal Enterprises' secrets.

Damon Swift had offered to manage the property in return for use of the remaining homes. That had been easily accepted.

Then, the FAA approached him with the idea of placing their newest super control tower for all North East traffic on the hill that rose about six hundred feet above the front gate of Enterprises.

Today, it contained the long-range tower for the Swifts runways and flights as well as the FAA's facility.

"Yeah, I suppose, but I didn't want to ask," Bud told him.

"We have more than twenty houses empty right now and just seven occupied. It would be better to have them occupied than sitting there. We have them for the use of important guests and senior contract workers. I can think of no better thing than to have your mom, dad and grandmother in one of them. *Of course* they are welcome to come out. They can even pack up and we'll fly them out here on a supply run," Tom offered. "We have a weekly jet coming from one of our subcontractors in San Jose. Tell them to get to that old military airfield that NASA uses on Thursday around noon and we'll welcome them with open arms!"

By the time they touched down on Fearing Island, Bud was enthusiastic about getting his family away from the problems of his home state.

Their prisoners—living and otherwise—were unloaded into the waiting arms of a team of U.S. Marshals and two FBI agents.

Before they climbed into Tom's commuter jet, the Toad, Bud phoned his folks, explained the offer, and was pleased when they accepted it without more than cursory reservations.

"Mom gave the standard, 'But we don't want to be a bother,' and 'What will we do for your grandmother's medicines?' Dad was more straightforward with, 'Will I be able to work remotely from way out there?' " He smiled. "I guess he thinks only the heart of the Silicon Valley has technology these days!"

When Tom showed up in the shared office three hours later and told his father about the invitation, Damon had chuckled and nodded. "Of course they are more than welcome. I haven't seen Bud's folks for at least two years. It'll be nice to get them out here for whatever time it takes to get things right out West. Umm, do you have any thoughts on that? And, before you answer, the reason I ask, and the reason I wanted you back here pronto, is that we have been officially asked by the Senate Subcommittee on Resource Allocation for the Western United States—one of Pete Quintana's latest groups—to look into the situation and propose one or more solutions. They're hoping for a miracle in record time."

“I had an idea while Bud and I were waiting for Gary and his men to get to the control tower up there,” Tom told his father. “It would include building some sort of large extruding machine to build a continuous pipeline from the ocean up to at least one of the major aquifers feeding the lower half of the state.”

Damon looked concerned at this revelation. He said nothing but sat there, fingers steeped under his chin.

Tom recognized the look. “What have I got wrong?” he asked in a tone that spoke of him asking in earnest.

“Well,” his father said now leaning forward, “it isn’t just the lower half of the state. By geography that doesn’t help anything above about the San Fernando Valley and certainly not, from the standpoint of water sharing, the entire San Francisco Bay area or down to San Diego.”

“Oh.” Tom now sat back slightly dejected. “I hadn’t actually checked a map. But,” he sighed and stood up, “if we ever need to fix just one major water source my idea was to build the pipeline, create a massive semi-permeable membrane about the size of a baseball stadium, and pour the salt water onto it. About seventy percent would make its way through, desalinated, and a sweeper arm would move the salt build-up from the screen and over to a dump zone. The good water would enter the aquifer and head for the L.A. basin. I’d planned on making the pipe so that is was a 70/30 affair with the other thirty percent used to push the heavy saline back to the ocean.”

With a small chuckle, Damon said, “I think your idea would have a chance of working on the smaller scale. In fact, it might be a stopgap if this were just Los Angeles. We can at least suggest it. It’s far and away better than some of the crackpot schemes.”

The two inventors discussed several proposals that had made the news including one man claiming to be an “environmental scientist”—Damon had looked the man up and found no indication he had any such qualifications—who proposed that a series of one-thousand acre shallow ponds be built next to the ocean and flooded with salt water. The sun would then cause evaporation of the water leaving behind the salt. That water vapor would be blown toward the mountains to the east of the state by a series of gigantic fans—repurposed and repositioned wind generators—that would blow the moisture over the cooler mountains where it would

precipitate as rain and snow, "...naturally filling each and every reservoir with more water than we need!" had been the man's final statement.

Tom and Damon shook their heads at that one.

Nearly every other idea involved digging huge aquifers to drain all the lakes and streams into the populated areas.

Even if that could be possible in the short time available, it would be both deadly to all fish and most animal life and be illegal by both state and Federal statutes.

Tom asked, "Are all the desalination plants they started a decade or two ago in any sort of serviceable condition?"

"Not really. That big push the state made, oh, sixteen or seventeen years ago when you were little never got to more than about three-quarters completion on any single plant other than the one in Santa Barbara. Many of those were dismantled and the steel and other materials recycled five years later."

"And still the state did everything to get more and more people to move in," Tom said with a hint of weariness.

"They certainly did. As usual, except for men like Pete Quintana, politicians never looked beyond their own selfish interests. What would get them elected and re-elected. Bringing in tax money from newcomers has always been popular because it keeps the existing population's tax rates from going up too much."

Tom sat silent thought for a few minutes before going over to his computer and sitting down.

Damon, thinking the conversation had come to an end started to read through some paperwork sitting on his desk. It wasn't until Tom cleared his throat and spoke that he looked up.

"Then I suppose I'm going to have to find a way to get the water they need from out of the sky!"

Chapter Eight: Back to Shangri-La

IT was two days later that Tom went looking for Doc Simpson. His lower belly to the left side was hurting. With what little medical knowledge he had managed to pick up over the years he wasn't certain what might be over there that was giving him troubles. He felt a weakness as if he had been poisoned and thought to have it check before he went zooming off into space again.

A recognizable man, Doctor Walt Young, was at the Dispensary in his small office. He worked two days a week to support the growing needs of the primary physician at Enterprises. Tom was disappointed on hearing that Doc Simpson had left the day before on a small vacation.

He paused to say he would come back later—he noticed that the pain had lessened slightly and that it must have been nothing. He barely reach the door when he doubled up in agony and fell to the floor.

The next thing Tom knew, he was in a hospital bed with several people standing around him. His eyes only focused on one person... Bashalli, his wife. With a lop-sided grin he asked her, "What hit me, and did you catch the number of that train."

"Oh, Thomas, you frightened us so!" Tears ran down her cheeks. Tom's eyes swept across the group around him.

"Anyone?" he pleaded. "A hint? Anything?"

"Tom, my boy," his father spoke up from behind Bashalli, "you just had your appendix taken out. Now, you lay still and let this excellent medical staff take care of you. I *will not* see you at work until they say you are good to go!" His voice was stern but his face showed how worried he was.

* * *

The Swift medical jet came streaking out of Tibet, crossed over India and headed out over the Indian Ocean. Maggie was half asleep thanks to an injection that Doc had given her once he finished her medical examination. To his surprise she was not a problem at all. She quickly changed into the warmed, cotton gown he gave her and his physical exam went pretty fast.

After taking several vials of blood from her—he might

have liked to take a little more but her overall condition made that dangerous—he placed them into various machines so it could be analyzed.

Harlan's assumption was right. She must have been on death's door step when she reached Earth, and he, too, was amazed that her skin was as good as it was. She had nearly zero body fat and had large muscle groups beginning to atrophy.

Harlan had, during one of her morphine-induced sleeps, done a fine job setting the broken bones. Her forearm was mending fast and no longer had to be immobilized. Doc just put a soft cast on it just to the wrist. He'd instructed her to start bending the elbow, flexing the hand, and moving the whole arm around. Later, he would add a small amount of weight to it to help with gaining back strength. With luck the physical therapy would not take long.

Her head wound was another matter.

Doc got so absorbed in what he was doing that he barely registered that the jet had taken off, and was winging its way, by now, out of India. It was then that he gave Maggie her first shot. This one to relax her and make her somewhat drowsy, but still capable of answering questions and following instructions.

A MRI exam was out of the question. High intensity magnetic fields and metals in aircraft don't mix. After a series of X-rays that were digitally transferred to his oversize viewing monitor he was at a loss for what to do next.

The wire was not what it seemed. It turned out to be part of a flexible wall-holding strap. Straps like it came in different lengths and were constructed so that when the ends were pushed in the tip receded a bit and, in three seconds, it shot out hundreds of barbed micro-carbon strands that would interlock with any soft material around it. These were used primarily in space applications that had soft walls made out of woven materials or foam.

It left Doc wondering how she acquired it. Until two weeks ago she was under the care of the deceased hermit monk, and she had been for three and a half months. Given her condition he had done a marvelous job.

But, why a high tech fastener at the monk's hut?

What had happened in that desolate place? he wondered. He would have to ask Harlan. So, after giving her the second

shot that would cause her to sleep for hours, and giving his monitor a quick look to see what the serum testing machines had come up with so far, he set out to find the one person who might be able to give him some answers.

But, Harlan had no answers for him. He had plenty of questions swimming around his head he knew Doc wasn't able to answer just yet, so he did the next best thing. He told Doc the story of what happened to him while on his Tibetan trek.

"So you saw nothing that that wire could have come from? No sign of her E-Vac ball? That's the most likely place that it could have originated." Greg Simpson was acting more like a detective than a doctor.

"Hey, Doc, remember me? That was *my* job before I became a *Lunatic*." He turned serious again. "She did mention the term 'renegades,' and that has me puzzled. Maybe she had a run in with them. But, then again, I don't see them leaving her in any conditions where she would still be alive. Women out there are hard to come by, and a lone, white..." he trailed off.

"Good point, and I don't need details. Instead, let's talk medical options." Doc sat back and looked out the small window in the aircraft's passenger area trying to find a better way to discuss Maggie's prognosis. There was none.

"First off let me explain that it's a miracle that Maggie is still alive. I don't have the full results, yet, but she has several permanent problems."

Harlan had asked to be given all of the information, even the distressing kind, so Greg continued.

"Her heart is beating slowly in what's called Cardiac Arrhythmia, but it is being caused by Catabolysis. That's the breaking down of muscles and body tissues that keep the nervous system and heart muscle functioning. She will, at some future time, need a pacemaker.

"Her kidney functions are only about seventy to eighty percent and her intestines are also in rough shape. There may be a need to remove areas in question. More invasive testing will be required to make sure."

"That's sounding like a slow death sentence for her." Harlan was visibly upset by this news. His face turned white. Greg Simpson noted this and patted the larger man's arm.

"With proper care she can have twenty or more years to

live."

Harlan gained back some color with that information.

"She will just have to be watched, not coddled mind you, but no four minutes miles or climbing mountains. A sedate lifestyle filled with daily, short workouts to maintain muscle and cardio health would be recommended."

Harlan had another question, but Doc had foreseen it. "And, yes, she can engage in more intimate exercise, but she will never be able to handle giving birth."

Harlan gave a small shrug.

"Now about her head." Doc was as tense as Harlan was and he waited for a moment before continuing. "Harlan, we definitely need to operate." The doctor looked at his friend closely trying to judge his reaction. "That wire has to come out. But if I just pull it out a large portion of her brain will come with it. That wire is a soft wall fastener for space applications and you know how messy it gets trying to pull then out of foam materials. The same will happen to her."

"But, Doc I've seen them come right out of wall with no fuss with that remover gadget they use."

"That's the problem, that gadget heats up the wire and melts the micro-carbon strands. Then the fastener is easily pulled out. But the barbed ends of the strands are left in the wall. The heat would destroy too wide of an area of tissue. She would be left with brain damage. And there is no way of telling how extensive it could be."

That was the worst he had to tell Harlan. He sat there waiting for the next question knowing that Harlan was not going to let him off easily.

"Doc, if you can't heat it up, what about freezing it. I've seen what liquid nitrogen can do to things." Harlan was at the edge of his seat just inches from the doctor's face as if nearness could force a doable answer from him.

"The same thing—"

Harlan cut him off. "But they do that for Parkinson disease and other neural abnormalities," he shot back in anger.

"The same answer, Harlan. Too broad an area is involved. The risk is too high." The tension was ramping up, and Doc didn't like it.

"Then freeze the metal, shatter it with a laser and

immediately vacuum it up."

Doc's eyes squinted for a moment, and then he laughed and actually kissed Harlan on the forehead before pushing him away.

"Genius, totally genius!" he yelled over his shoulder. He was already racing back to his patient. Harlan hurried after him. He didn't know what the Doc was going to do for sure, but, he was going to be on it.

It took Doc Simpson two hours to get things ready. He had everything he needed in this well-equipped hospital jet. The only thing he lacked was a skilled surgical nurse; time and circumstances had dictated that nobody else would come on this mission.

Harlan volunteered. With some brief experience and training while a member of the Secret Service years earlier, he insisted that he could pass what Doc needed and take used instruments and other things away. He knew how to read medical monitors and adjust them when told to.

On the surface of it the operation was a simple procedure. A drop of liquid nitrogen, a flash of the laser, and a quick vacuuming of shattered steel. Then repeat the process. Three easy steps, all the while keeping the patient asleep, immobile and alive, hoping that the laser beam did not bounce off into the tissue because of a little fragment that was so shiny that it became a mirror of destruction.

In a hospital the operation would have been rigidly controlled by using alignment stops and all the suction nozzles would have been restricted in movement. Doc had no such luxuries and had to do it all by hand and align the tools using a mini-cam mounted directly over the wire along with the metal stand as a solid mounting place.

It wasn't until he made it down to the fluid membrane that cushions the brain from outside shock that he ran into a problem. The fluid was going to cover the end of the wire and flow out of the hole left by the wire if he kept going down.

He needed a sterile sleeve to slide down around the wire to keep the liquid out. Doc let his mind race through the list of items that he might use, and he settled on using a cut off end from a sterile plastic suction tube. They came in several diameters; the smallest did the trick.

Just before he slid it down the wire he realized that the tube could also be used to keep everything in alignment. He

just had to make it longer and keep it going down evenly with the disintegrating wire. After that things went faster and with less danger of a mistake.

The sleeve stopped when it touched the first of the micro-carbon strands. It had done its job. The last few centimeters of wire was vacuumed up and the job was mostly complete.

While the operation was going on the jet winged its way from the Indian Ocean, across Madagascar over the tip of South Africa. Hours had passed and both men were near exhaustion. The hole left by the removal of the wire still had to be filled. Leaving it was an open pathway for infection.

Doc drew a few CC's of bone marrow from her femur. He injected it into the hole. The bone marrow was dense and would hold the hole from collapsing. It would be readily absorbed by the surrounding brain tissue as it slowly healed.

He then put Maggie into an induced coma. He would not make any adjustments to that until they landed in Maine and perhaps even longer after that.

Both men took four hour shifts watching over the patient.

They flew across the Atlantic to Buenos Aires and up the western coast of South America to Panama. Skirting Cuba by overflying the Dominican Republic they crossed into U.S. airspace east of Miami, Florida and then had to fly out to sea to miss a coastal storm making it way up the East coast off the Georgia coast. They swept back to hug the coast just above Cape Cod. The last stop was a small pasture near a lost lake in Northwestern Maine.

Called Gander Lake, it was, Doc and Harlan had to admit, shaped like a goose when viewed at their current angle. It also seemed to be filled with about a thousand geese paddling around in the "body" of the lake. Their destination was to be a large cabin sitting under the cover of the trees to the north of the lake.

Red had come to the area a few months before and dropped a few of Tom Swift's flame retardant bombs onto the pasture. He now spotted the slight discoloration and hovered above it a moment before he used the jet lifters to set down. He was back in the air in less than four minutes telling the control tower at Bangor Maine that he had hit a bad wind shear and almost pancaked it. He then continued his flight to Montreal, where he had the most wonderful week of vacation, all on Harlan's dime.

Harlan checked out the area around the cabin while Doc made their patient comfortable. After the two men had something to eat Doc took Maggie off the coma drug. In minutes she started to show signs of awakening. At last her eyes opened, she blinked a few times and did nothing more.

Doc performed several quick response tests. Shinning a light into her eyes, tapping her knees, running the back of his pen up the soles of her feet. Lastly he pinched her in several places. He received very little movement to all the stimulus. Her mind was not reacting. She seemed brain dead.

Harlan watched intensely throughout the whole exam. When he saw the helplessness on Doc's face he slammed his fist into the log wall and stormed out of the cabin.

He kept walking until his feet went into the cold water of the lake. There he stop and looked up into the star-filled heavens and sobbed into the night. A long wolf from across the lake answered him back. Then all was silent. He stood there until the stars faded from the sky and the sun was above the horizon. He never felt so missable in his life.

How could I love such a despicable person?" he kept asking himself over and over again.

"Harlan?" he heard faintly behind him. He whipped around and Maggie was standing there, mostly held up by Doc. "Harlan, are you mad at me? Why were you not there when I woke up?"

Harlan couldn't believe it. She was alive! And by the sounds of it not a kid anymore, but a woman. The woman that he felt coming out of Maggie every once in a while when everything was quiet and peaceful. The true Margaret Masterson St. Philips, who never had a chance at a "normal" life.

He rushed to her side and swept her thin, boney body into his arms. He was crying and laughing at the same time.

Gasping for breath, he asked Doc at last, "How did you do it?" He started to carry her back to the cabin. Doc walking by his side, marveling at the change in his friend.

"The truth is I did nothing. I was setting up the portable X-ray machine and the EKG to do some tests to see what could be the cause of the paralysis when she started to talk to me, asking where you were. I rushed to the door to find you, but I couldn't see you. I had to go back to her and run more tests to see if her condition was stable and to actually find

out who she thought she was."

They were nearing the cabin and Maggie had her arms around Harlan's neck and her head on his shoulders. A small smile of delight was on her lips and her red eyes gleamed happily.

"In the passed few hours I've come to believe that Maggie has rejected her past... no that's not right. She no longer remembers her past. But she's not young Maggie anymore either. Somehow her brain, her subconscious, has fused the education of her life and the adult experiences into the young girl making her a woman with the right outlook for her age. She remembers her life until twelve and being in the cave with her father as he worked. She remembers reading books and learning things up until then."

As the doc talked Harlan had put her back into her bed and sat beside her. She was falling back to sleep. Doc pulled up a chair from the table and sat near Harlan, but at an angle to watch her face.

"Now it becomes weird. She talks about you and showing you at the huts in Tibet. Most of it coincides with what you told me. She doesn't remember how she got there. Only that the monk 'Hey-You' took care of her."

"What of her twin brother?" He had to know.

"According to her, she is an only child. Her mother died of some kind of fever when Maggie was eight. She stayed with her father long after that. They went to the village every few weeks to buy food and order things that they needed to have delivered, especially before winter. That sort of things."

"No other people? No outpost? No monks?" Harlan was awed by it all.

"Nada, my friend, nada."

"So what do we do now, Doc? Is it right to turn her over for crimes she can't remember?"

"That, Harlan, I can't answer for you. I'm just a sawbones, not a priest passing judgment, not a lawyer pleading a case, or a supreme court judge searching for truth. That will take a better man than me. And I personally judge you Harlan as one of those men. My oath won't let me hurt anyone. I must do my best to heal. I've done my part. What happens now is up to you."

The three of them spent the rest of the week talking,

taking walks that became longer each time, and eating. Eating a dozen times a day. Always small meals, but meals designed to help Maggie grow strong and put on weight in all the right places. From a skin and bone skeleton she became a skinny figure of a woman. But, she had classic looks and poise.

It seemed no time at all when Red was landing the jet to check up on them.

* * *

“How did this happen?” he asked a young nurse who was lifting his sheet to check his dressing. “It hurt on the left side, not over where the appendix is.”

“I can answer that,” came a familiar voice. “I go away for a few days and you go and get such a horribly inflamed appendix that I hear they barely got it into the pan on the table when it burst and sprayed everyone. Not a good thing, skipper,” he said as he stepped forward and took the sheet edge from the nurse. “Let me take a look at that.”

Doc peeled back the gauze cover and checked the incision that had been made next to Tom’s navel. “That ought to heal up nicely,” he said replacing the sheet.

“At least I didn’t get clobbered this time,” Tom told him as he settled into his pillows.

“No, you didn’t... at least not from the outside,” Doc admitted. “Doesn’t mean it isn’t as potentially deadly,” he added under his breath as he turned away from the bed. “Everyone except Bashalli, go home. You can come back tomorrow, but he needs rest right now. Shoo!” He made the appropriate motion with his hands and turned back to Tom.

He told the inventor that appendicitis pain typically is sensed more in the middle of the belly and to the left, not directly over the organ. “Along with the ‘why the heck do we even have one’ question, it is one of nature’s little jokes on we mere mortals,” he ended with.

Tom nodded and settled back into the pillows. Everyone except the two others had left the room. But a moment later, and with a gasp of pain from flexing his abdominal muscles, he asked, “Doc, if you’re here, where’s Harlan?”

Doc turned back to Tom. “What?” he stammered, taken by surprise.

“Come on, Doc, this is Swift Enterprises. There are no

secrets between me and my pals." He laughed. "Harlan told me his plans."

Doc pointed a finger at Tom. "I'm surprised your *pal* Bud doesn't know the answer. That boy has his nose on every flight in and out of here."

"Point made. But, if you're back, where's Harlan? And most important, did he find the Empress Shangri-La?"

Now Doc was in a quandary. To tell, not to tell, or lie. Lying was out. Not telling was also out.

"Look Tom, I did what I needed to do, and can we leave it at that? It's Harlan's story, not mine." He said it in a tone that left no doubt on how he felt.

"Fine, Doc. I'll let it go on one condition."

Doc lifted his left eyebrow at Tom and nodded.

"Did he find her?"

"He found her and a grave. The second response is a bonus. Make of it as you will. The rest, Harlan is going to have to explain."

"Fair enough."

After Doc left them, Bashalli came across the room, climbed onto the bed to lay next to her husband of just four months. She stayed there until the inventor fell into a deep sleep about ten minutes later, and then she went home.

Chapter Nine: Diminution of Flow

GARY Bradley and his team spent three days wandering throughout the first of the colony domes. Everywhere they went they stuck inconspicuous sensors to the ceiling that would alert them to any movement and provide video of anyone in those areas.

A computer kept a lookout on all sensors, disregarded the team—except to know where each man was at all times—and provided positional information on any interlopers.

So far, there had been no one.

They had taken over the storage room by the outer airlock and set up their base of operations in there. The doorway into the rest of the colony had been reinforced with a shield made from the remaining fabric and spray Tom had delivered. So, even when they raised the door, nobody could see directly in and no small arms fire—or the electric guns the U.N. seemed to be carrying—could penetrate more than the three feet before it struck the barrier.

By that third evening Gary was convinced that short of hiding in some closets they might have overlooked, the Major-General and his final two U.N. men, and however many of the Elite or slave members they had conscripted, were almost certainly not in this part of the colony.

That left a four other domes, all of them underground and mostly made up of huge open spaces.

“Chief?” Fitzgerald, having moved inside along with the *Straddlers*, “what happened to everyone who should be in this part of the base? You know... the workers?”

It was a good question and one that was haunting Gary’s thoughts more and more. According to Harlan, at least two hundred people should be found in the above ground part of the base at any time of the day or night.

Fifty of those should be in the water purification plant. That seemed to be running on automatic, only not very well.

A radio call back to Earth and to Enterprises had been made earlier in the day.

“Mr. Swift? It’s Gary up at the colony,” the signal, bouncing off an orbiting satellite, had gone out. “I know it will take at least fifty minutes to get a reply bounced back to me but here’s a little poser for you.” He described how on day

one the water meters of the purification plant showed a flow rate in excess of a 1,000 liters per minute. That, by the following day, dropped to 994 and today, day three, it was running at 986.

“Can you ask Harlan what we need to do? There is nobody to be seen anywhere in this part of the base. Out!”

* * *

While his father was handling communications with the team on the Moon, Tom asked Doc to okay his being wheeled to his underground office and lab.

“I promise I won’t get out of the wheelchair. I just need to attend to a few things I can’t form here.”

Thirty minutes later he was sitting next to the parking spot for his first major invention, the *Sky Queen*.

Now used less frequently—his Toad SE-11 Commuter Jet was generally sufficient for most travel within the continental U.S.—the *Queen* had just undergone an extensive overhaul. Her compliment of small lab cubicles had been replaced with a single, large lab space featuring a 3D prototyping system that began with his amazing Telejector system that could be used to check anything from a myriad of inputs, and then, if needed, a 3D printer capable of using several types of materials could make it real.

Her hangar at the rear of the jet was nearly thirty percent larger following the removal of an infrequently used storage room.

She was painted with a new coat of liquid tomasite to give her added protection for high altitude travel—now capable of rising up to more than forty miles in altitude—as well as to give her some color. She had been bright white from day one, but Tom always wished she could be a sleek, pale blue.

Now she was.

In his office he sat looking across the floor at her nose and forward landing gear as he thought about his options for bringing water to the parched state.

He considered and dismissed his ERBs, or Endless Rain Barrels, as a solution. While he had successfully deployed these humidity concentrators in Africa, Mongolia and even the American Southwest, the truth was that even the largest of them could only be expected to draw a thousand or so gallons of potable water from the air in a day.

He almost chuckled as he thought about how practically each and every block of all the populated areas of the state would need to have one. Or, more. It was so ridiculous that he shook his head and dismissed an idea that he ought to at least make an attempt to compute that number.

Having overheard Gary's message, Tom wondered if it might be a good idea to get one or several ERBs up to the lunar colony. If their pumping and purification system was beginning to fail, the many, many hundreds of people up there were in eminent danger, even more so than the people living on the West Coast.

He picked up his phone and dialed the Construction Company—the original Swift company before Damon had built Enterprises—and asked to speak to the manager, Jake Aturian.

“Uncle Jake? Tom. It hasn't been discussed, but we have an issue on the Moon that might require we quickly supply them some ERBs. How many do we have in inventory?”

The man, not really Tom's uncle but a very dear family friend, replied, “At last count we have eleven. Five earmarked for shipment to Sicily where they are needed to bolster their municipal water supplies. Why? What about the Moon? You do know there's no air or humidity up there, don't you?”

Tom chuckled. “Yeah, I know.” He briefly explained about the lunar colony and reminded Jake of the problems up there the previous year.

“Ahh. Right. I can have them coming back off of line... umm, line seven by this time tomorrow. We can manage sixteen a shift. How many do you need?”

“I'll have to get back to you on the exact number, but I'm thinking that twenty might be the target. At least I'll start with the ones you've already got that aren't due to ship out to paying customers.”

He arranged to have them ready for pickup the next day, and then called for a nurse to take him back.

Now, Tom thought, I have to find a way to solve the bigger problem.

* * *

“Damn and blast!” Gary swore on hearing Damon's reply message. “What the heck is Harlan doing out of communication and out of the area?”

He didn't expect anyone around him to answer and they did not.

It had been decided to use the Private Ear Radios in their suits at half strength. Even if one of the U.N. men happened to walk right through the narrow beam there would be no way they might decipher the message. Nor would they be able to home in to see where anyone was.

There was no more "element of surprise" to be taken advantage of.

"Dimmick? Status of the water flow down there."

A few seconds went past before the man answered.

"Holding steady at nine-eight-five, Chief. We found a valve that opens the intake a little, but we also found another problem. We might have the flow but the draw pressure is dropping. Only a matter of time before things head down again."

Gary swore again, this time using several ear-searing words. "Okay," he said when he calmed down. "Keep me advised hourly on the hour."

He sent another message to Earth advising them of the new problem.

"Poodle farts!" he muttered as he pressed the **SEND** key using the only words his grandmother once told him were acceptable when he was really angry about something.

* * *

"Hey!" shouted one of the men who happened to be watching the screen for their sensor system. "Look!"

Gary spun and stared at the screen. The layout of the upper dome was superimposed on the screen so he could immediately see the two blips that were moving down a back passageway behind the water reclamation and purification chamber.

From their slow and deliberate movement he could tell they were being ultra cautious about getting to their destination.

And, there could be no doubt of that. Their path was taking them to the only outlet for that hall, the water plant.

"Get over there, pronto!" he ordered the four men now in the room with him.

While they grabbed their gear and raced from the room,

Gary got on the radio to the rest of the men. Two teams of three men were actively patrolling at all times.

This left Gary in the storage room with Fitzgerald.

He pressed a button on the console and ten new dots, blue instead of the red of the intruders, appeared showing him the location of all his men out there.

“What if those aren’t the U.N. men?” came Fitzgerald’s voice from over his right shoulder.

“Good question. Hang on—” He brought up the video feed from a sensor about fifty feet in front of the intruders. It was a telling picture. Gary keyed the microphone on his headset. “Teams one, two and three. Intruders are, I repeat are our U.N. men. They appear to be both heavily armed as well as carrying some sort of box. My guess is that it is an explosive device.”

He paused and checked everyone’s positions.

“Team three, you are nearest to the plant. Enter ASAP and get around to the far side. It appears you will be able to get to the back door before they come around the last turn. Hop to it!”

He steepled his fingers under his nose. “Fitz? What would you do if you were me?”

“Ummm, I’m not sure I follow, Chief.”

“Well, I mean, what would you tell our men to do once they get that back door open?”

The other man thought a few seconds. “Oh! First I’d tell them to not use either the explosive or the shock charges. Both would probably set off whatever those two are carrying. I guess I’d shoot a sleepy capsule along the floor just before they get to that last corner. It ought to knock them out pretty quick.” He was pleased with his response.

“I see. What if the bomb has a dead man’s switch?”

Now, the other man blanched. “Jeez. I never thought of that, Chief. Wow.” He went silent.

Gary keyed the mic again. He relayed the order to use only an anesthetizing gas sphere but cautioned them about the possibility of the switch that would set things off as soon as the man holding it relaxed his grip.

“I don’t think they have the smarts to do that, but make the shot across the floor and get the door closed again. In

fact, get two men back before the shot. Out!”

* * *

“Yes!” Tom shouted at nobody as he sat in his bed with on of his L’il Idiot computer pads in his lap. “I can do it!”

He had been sketching several ideas when the thought hit him that there were sources of water that could do everything he needed. They weren’t a permanent solution because of the potential for causing irreparable flooding, but in the short term, and only supposing he could find a way to get rid of the extra water, they would do the trick.

Comets!

That one the Empress and Emperor of the lunar colony had tried to use against Earth had been very large and made from nearly fifty percent ice.

He pulled up some notes and did a calculation before sitting back, a happy smile on his face.

Although now too late to bring it back close to the planet, that comet had originally contained enough water to fill Lake Superior and Lake Michigan. And that, along with good conservation of the water still available to the people in California, would give them enough drinking and irrigation water to last more than a year.

But, he had to get it there some way.

* * *

Team three made it to the back doorway of the water plant in record time. A quick peek out of the slightly open door showed them nobody was yet in sight.

With helmets back in place so they could converse without being overheard, the team leader, Dimmick, called Gary.

“Chief? We’re here and they are not. Status on their position, please.”

“Thirty feet to go to the last corner, but they’ve been stopped for about fifty seconds. Both are in U.N. blue. I think they are taking a rest. They’ve set the box down and are slumped against the wall. Oops!” he said as he spotted something on his screen. “Looks like one of them spotted our sensor and camera, He’s pointing it out to the other. Now, they’re getting up and picking up the box. They’re heading toward the corner. Make the shot!”

Dimmick motioned his other men to back off and brought

the gun up to his shoulder. As he was lying on the floor, he propped his other arm under the stock and squeezed off the shot.

The blue sphere shot out and skidded across the floor until it reached the far end of the hall. There it exploded sending its charge of gas out in all directions.

Dimmick closed the door and stood up. "We give it a minute and then we go get us a couple more U.N. men" he declared with a big grin.

* * *

Tom was practically bursting with laughter when his father walked into his office.

Damon smiled at his laughing son. "Hello, Tom. You look like a man with a plan. So, tell me what you have been doing that has you so excited."

The younger inventor offered a chair to his father.

"Okay. Follow me on this but please wait to the end to tell me if I've got this wrong." Tom took a deep breath. "We both know that the situation on the Moon and down here as far as water goes is dire. Oh, and I want to tell you that I've arranged with Jake to get a few of our ERBs ready to take up to the colony. Even if they are losing water into the ground, some of it has to be evaporating and we can at least reclaim that."

He went on to outline an audacious plan to send a small fleet of his Attractatron mules out to capture a comet.

"There are supposed to be three of various sizes heading in right now. At least two of them have been measured and are mostly ice. Water ice, not methane like the third one."

* * *

"We have them," came Dimmick's call a few minutes later. "Looks like the General is getting wily. One of these is a real soldier and the other one is looks to be one of the Filipinos in a U.N. uniform."

"Nuts!" Gary said. "That means we still have two to worry about. I was hoping we'd have him all alone and perhaps convince him to give up. But, now—"

"Wait, Chief. Pat just checked the pocket and it turns out the Asian is one of the U.N. guys, ID card and all!"

Gary pumped his fist several times in triumph. "Great! Tie

them up and being them back here. Oh, and let team one take over guarding the area. Good work, men!”

Less than ten minutes later the prisoners, completely unconscious, were shoved into one of the larger lockers. The bomb had been disarmed and was taken outside.

“Only one status thing to report, Chief. The water flow is continuing to diminish. It was down to 977 just before we left.”

As team three took a rest and food break, Gary motioned to Fitzgerald. “Come on, Jeffrey. Let’s you and me head upstairs to make a little plea to the General.” He walked toward the door with the younger man following.

Up in the tower they both took seats. The patch for the blown out window was holding very well, but Gary told his man to keep his helmet on.

“You can open the visor but set it to auto-shut if the pressure drops,” he ordered.

Picking up the microphone from the communications console, Gary composed what he was going to say. After a minute he keyed the mic and spoke.

“Major-General? This is Gary Bradley, the leader of Enterprises’ Security detail. I hope you are having a better day than your ten men. By my count, and in case you didn’t know this, you have three dead and seven captured. A few are already back on Earth singing their hearts out to the FBI and anyone else who will want to hear about how you have tried to make this small protection assignment into your very own personal, ‘Call Me Dictator’ strike. You have been most unwise.”

He unkeyed the mic and waited to see if the General would respond. A minute passed.

“Oh. Nothing to say, General? Well, then let me make an appeal to all the fine citizens of this colony, most of whom remained behind to pursue their new lives up here. Their *free* lives. Harlan Ames wants us to assure you that he will be back very soon and that he hopes you will assist us in ridding the colony of the military scourge. But, do not place yourselves in any danger. We will eventually find the General and take him back to Earth to await his fate.” He looked at his companion and shrugged.

“General? I have been authorized to offer you a sort of amnesty. Come along, unarmed, to the outer storage area and airlock below the observation tower. You will be treated

a befits a senior officer. We do not wish to turn this into a manhunt, sir.”

He need not have bothered. There was a reason why the General had not responded to his little jibe. And, that was made all together clear that evening when the alarm went off and one of the sensor cameras showed a small group of Filipino men and women coming out from an elevator connecting the upper dome with the first underground habitat.

They walked along in the low gravity shuffle most had become accustomed to, making their way down one passage and taking an unerring turn that would bring them closer to the storage room.

Gary switched to another camera and brought the group into closer focus.

The lead man carried something gruesome in his hand, fingers tightly grabbing onto the stubby hair of what had once been the head of the Major General.

“Oh... That’s just gross!” Fitzgerald said before turning away from the screen and vomiting.

* * *

Bashalli came to pick up Tom at the small Enterprises' hospital. Walking into the building she was pleased to see that Doc, Mr. Swift and Bud were already there.

"Gee, I'm just going home for the rest of the week. I didn't expected a send off committee." Tom was happy to see them when he came out to the front room.

"He thinks quite highly of himself, doesn't he, Mr. Swift?" Bud wisecracked.

"He sure does, Bud. Must get that from his mother’s side of the family. I, for instance, was just passing by and stepped in to get out of the sun. He wasn't even in my thoughts," Mr. Swift replied, keeping a straight face.

Just then, a black SUV with tinted windows drove up and Harlan stepped out and waved at Bashalli and the four men. He opened the passenger door and helped out a tall, willowy, red haired beauty with almost glowing green eyes. Her face was marble white with a speckling of red freckles.

Her movements were slow and deliberate. It seemed she was having a hard time with her high heeled shoes; she wobbled more than a bit.

Harlan had her by the arm, and he directed her first to

Mr. Swift. They shook hands and as Mr. Swift took hers Harlan introduced them.

"Hon, this Mr. Damon Swift, founder of the complex. The young man in the wheelchair is his son, Tom. This other young man is Tom's best friend and recently his brother-in-law, Bud Barclay. Of course, you know Doc."

"A pleasure once again, Doctor Simpson," she cooed softly.

"Mine more than ever, Maggie." The transformation that Harlan had made on her in the past twenty-four hours since he left them had him floored.

"Yes, gentleman, let me introduce to you, Margaret Mather Masterson, sister to the woman who was known as Empress Shangri-La."

"Jetz, Harlan, how did you find her." Bud's eyes were popping out of their sockets looking at her. He was really glad that Sandy, his wife, wasn't there at the moment.

"In a way Bud, she found me. I went to Tibet to the outpost to see where this all started, and I found Maggie standing over a newly filled grave. From where it began, it also ended." Harlan had spent hours crafting his little cover story. He never told a lie and he kept it simple. He just let them jump to conclusions that were never stated.

A station wagon pulled up and the female halves of the younger Swift and Barclay clan stepped out. Introductions were made.

Sandy whispered to Bashalli, "Glad we got our hooks in the boys already, or those poor fish would be jumping." Bashi just gave Sandy one of her lost, 'I'm not American, and have no idea what you mean,' looks.

Harlan cleared his throat and made one more announcement. "I was going to wait until later, but since everybody is here I might as well tell you. Maggie and I got married yesterday."

Chapter Ten: Panic!

WHEN the small group of men and their repugnant offering arrived at the large door of the storage room, Gary and three on his men, visibly unarmed, were waiting for them.

The man with the dismembered body part handed it to another man behind and to his right, wiped his hand on his already filthy and torn pants, and stepped forward.

“My name,” he said in a recognizable Filipino accent but perfect English, “is Saclolo Reyes. Señor Harlan had left this colony in the care of myself and my wife, Magadia.” He pointed over his shoulder to the man now holding the head. “That is Robert Perez. He is my brother-in-law.”

Perez smiled and started to wave but found that moving the head seemed to make their guests most uncomfortable, so he merely shrugged, kept smiling, and nodded.

Despite the gore remaining on Saclolo’s right hand, Gary reached out and shook it firmly.

“I know of you and your wife, sir. We came because Señor Harlan asked us to assist you in regaining your rightful command of this colony. We have captured or removed all the known members of his,” he nodded over Saclolo’s shoulder, “men. As far as we know, it was a group totaling eleven. Is that also your understanding?”

The Filipino nodded. “Yes. Unless, that is, someone is hiding in their ship. Can you remove that, please. It landed too close to the crater rim and we’ve detected crumbling. We cannot have it crashing down on us.”

Gary promised to have it removed as quickly as possible. He turned and barked out an order. Eight of his men assembled at the doorway.

“Get suited up and out to that ship. I want to know if there are any reserves in it, and see if those little scooters of ours can do anything to move it. Otherwise I’ll call the skipper and get the *Challenger* back up here. Go!”

When he turned back it was to see an embarrassed look on Saclolo’s face. “Uhh, what do we do with the officer’s remains?”

Gary’s shoulders slumped. He issued another order, this

time to bring out two body bags. He handed them to Saclolo and asked, "Can you put that head in one and take the other to wrap up the body. I'll take what you've brought now, and once you can bring the rest of him, I'll take that as well. Oh, and although things ended a bit, ummm, awkward for us, you have my undying thanks for what you've accomplished."

Saclolo and all the other people behind him beamed at the words.

* * *

Harlan pulled Maggie into his arms and watched the faces of everyone around them. He could feel her body tense up and that she was apprehensive. Since leaving Tibet everything was new to her. In her mind she'd only lived in that small mountain valley and visited the far away village once or twice a year. Never anything like this.

Doc Simpson stepped up to them and hugged them both.

"Congratulations!" he said loudly. Whispering into both their ears he said. "I knew this was going to happen. And you did an amazing job on Maggie. I didn't recognize her at first. But Harlan, she still needs my medical care. You'll have to stay here for a few more weeks."

"Got that covered, Doc. Wait and see." Still smiling, the doctor stepped aside and the couple were rushed on by everyone trying to congratulate them all at once.

An impromptu dinner party was quickly arranged for the newly married couple at the Swift's favorite Italian restaurant. People who knew Harlan came and stayed to see and wish the happy couple well. Harlan never realized how many friends and coworkers cared about him.

Hours later, close to midnight, Harlan and Maggie sat on the sofa in the Swift's home. The Ames' were going to stay in the guest room a few days. Damon and Anne insisted on it. Harlan had closed down his small house a year ago, and it was not feasible to open it for just a few days.

Tom and Bashalli were still with them. Doc, Bud and Sandy had left for home a little while earlier.

Maggie, looking somewhat uncomfortable, took Harlan's arm and squeezed it before she quietly spoke.

"Mr. and Mrs. Swift I don't... I mean Harlan and I don't know how to thank you for all your hospitality. You have opened your home to us, and that is more than I can ever

repay."

"Come now, Maggie," Anne replied as she went to her and stooped down to hug her and Harlan. "I was told that life has not been very kind to you, but, that is not how it is going to be from now on. Harlan has helped and saved both my husband and my son far too many times to count. He is as much a part of this family as my son-in-law and daughter-in-law." She nodded at Bashalli and winked at her. "I don't know you well... yet, but if Harlan loves you, then in my heart there is space for you. Welcome to the family!"

Mr. Swift turned to his wife, "Anne, you couldn't have said it better. Maggie, welcome," and he hugged them as well. Bashalli and Tom joined in.

Harlan didn't know what to say. He just nodded thanks as tears fell from his eyes.

"As part of the family then you all have the right to know Maggie's story," Harlan told them.

"Before you begin, Anne," Mr. Swift spoke up, "let's get that coffee you started; we may be here for a bit."

Harlan told them the truth most of the time. There was so little he had to change. And some of it was just plain conjecture on his part.

"When I found Maggie she was at a grave. The grave of a monk who had taken care of her since she was a child. Her father, Professor St. Phillips, was a well known Sanskrit translator and writer. He took his family to Tibet to do hand research in the ancient Guge Kingdom of Nagri.

"In the many hidden tunnels and caves in those stunning monastic buildings and the ruined palace he found a script that told of a hidden cave full of tablets predating all known writings. A possible missing link between the oral and formal Sanskrit text. He took his wife and twin children with him. They were ten at the time.

"Professor St. Phillips did not know that his wife was pregnant at the time. Months later she became ill at the end of her pregnancy. Because of the illness she died during childbirth."

Anne's hand went up to her mouth.

"Two years later an avalanche covered the outpost and only the twins walked away. Of her brother and sister, Maggie knows nothing."

All the Swifts were amazed at the story.

"So how did Maggie survived?" Damon asked.

"That, Damon, I only vaguely know," Harlan looked at his wife, and Maggie spoke up for the first time.

"You see, the Monk I named 'Hey-You,' took care of me after my mother's death. He was more a father to me than my real father. Father worked in the cave, and Hey-You was helping him and watching me when the avalanche happened. We were trapped in there when that main passage was blocked. But Hey-You knew of the secret tunnel. He uncovered it and we got out. Only the two huts remained of the outpost. The monk and my father had no way of shifting the tons of rock to try to find anyone, and we were too far out to get help."

"You remained there?" Bashalli asked, amazed.

"The monk would not leave the outpost. His life was devoted to keeping it safe. Though it was now buried under tons of rock, there was still the secret tunnel. He had to guard it.

"My father must have gone a little crazy over this because he just buried himself in his work. I was brought up by these two men. Both a little insane in their own way by what Harlan tells me. But for me, that was my life.

"Father died about ten years ago, I was twenty then, and I had no place else to go. I read and reread all the books that he'd had, which were many. I kept up my English that way. Hey-You never really talked to me although I know he knew English quite well."

By then Maggie was having trouble talking; she was near exhaustion. It had been an extremely long day. Harlan took over the narrative.

"As far as I can tell some renegades show up at the huts. That had to be a week, no more than two, before I arrived. Maggie can't remember the details. Only that there was a fight. Hey-You was fatally wounded and Maggie suffered a head injury and a broken arm. From that point on she remembers very little.

"The monk must have lived for a time and he did what he could for Maggie, possibly to his own detriment. The rest is known history."

"That's just horrible, Maggie," spoke up Anne Swift. Both

she and Bashalli were disturbed by the account.

"Come now, ladies," Mr. Swift added. "Maggie is here and the past is something we cannot change. Let's be thankful that she's with us now, and that Harlan has a wonderful wife."

"But Harlan," Tom asked, "what of the person you went to find in the first place?" Tom had noticed the Empress was never mentioned.

"That, Tom, I have to guess at. Maggie's head injury was caused by a Swift Enterprises' space wall fastener. The one with micro wire filaments. It was stabbed into her head. It had to come from the E-Vac ball. The renegades must have found the ball, and took everything that seemed useful.

"I had no way of finding them or discovering where they found the ball. All I can say is that it was in those mountains for almost four months. I'm sure she never walked out. (*no, she flew out, he thought to himself*) I was going to ask that the 'SuperSight' be used to scan that area whenever it was possible. They may find it, and we can go from there."

"I'll see what can be arranged," the younger inventor promised.

"Keeping Maggie alive was more important to me than finding a dead person." Harlan pulled his wife closer to him. He noticed that she was half asleep. Smiling he kissed her forehead, excused them both and carried her upstairs.

Two days later:

"Harlan, I tell you this is insane." Doc had him by the arm trying to hold him back. Harlan nodded to Maggie to keep walking to the Swift cargo jet that was almost ready to take off.

"No, it's not, Doc." He smiled at his friend. "I told you I had this under control."

"This is not control; it's a death sentence for her. She needs my care." Doc almost yelled it out he was so angry. "Besides, don't you think she'll be recognized for who she is?"

"You almost didn't, Doc. The people up there think she's dead. And they only saw her in the white kimono, with mile-long fingernails. They always had a hood covering their bald heads that left their faces in shadow and only their red eyes shining. Look at her, Doc. Do you see the Empress?" Harlan asked.

"Fine, but if they ever find out they'll tear her apart, and you won't be able to stop them."

"I'll take that risk." Both men were watching Maggie as she waited by cargo ramp at the rear of the plane.

"Anyhow, Doc, your not thinking right. The Moon is the best place for her. You sort of said so yourself." He laughed.

"But, I really didn't mean it! Dammit, Harlan, if you love her don't do this," he pleaded.

"Then tell me Doc, what did your two days of testing show? That she will never be completely healed, or pain free. That her heart and her muscles will always be weak and she will need more and more bed rest as she gets older. You'll just about crippled her if she stays here.

"On the Moon, she will be experiencing five-sixths less gravity as here on Earth. She's now a fragile, clipped dove that can't fly. On the Moon she will be free to soar like a normal person."

"But, Tom is planning to ring the place with repelatron emitters that will simulate a stronger, near-Earth gravity," Doc reminded him.

"Yes, for people wearing the body garments. Maggie just won't wear one. With some gravity already on the Moon there is no need for anything else. The Lunatics only need to exert their bodies more to keep healthy. Especially the children who've never felt Earth gravity. They will never be able to come back to Earth otherwise. The other planets will be off limits too. I don't want to condemn my people to the Moon and free space only. They deserve the best we can gave them."

Harlan was silent for a few seconds as he watched his friend's face.

"Listen, Doc. Why don't you pull up stakes and come back with us? We can use a space medicine doctor, and your one of the best. Think of what you can accomplish up there. You'll be numero uno, the one and only." Harlan did hope he would. The colony really didn't have a *good* MD.

"You have your replacement already sitting in the wings. You know you want to. Come on, join us and be as loony as we are. No taxes, no bills, no money. Everything is free. And I guarantee you will have hundreds of the best medical people in the world knocking at your door for the chance to

work with you."

Harlan let that sink in a moment before he continued his spiel. "We have an underutilized dome that beckons to bear your name. The Doctor Gregory Simpson University of Space Medicine, come one, come all. Specializing in little green men. I'll even put it in neon lights for all to see. Even from orbit!" He laughed as he moved his arm with an open hand in an arc across the sky.

"Damn, Harlan, don't do this to me," Doc pleaded.

"Don't damn me, my friend. You are the one damning yourself down here. Tell you what. Give us six months, and if it's not what you want I'll ship you home for free. Can't ask for anything better than that!"

But, the Swift's..."

"For God's sake, don't you think I didn't already ask them. They are the last people on Earth I would deliberately hurt. Will they be sad? Yes. Miss you... more than you'll know. Want to hold you here? Never!"

Harlan put his arm around Doc's shoulder, "We'll be a couple of days more packing all we can into the *Challenger*. Tom and Bud are taking Sandy and Bashalli with them. Find your favorite nurse, pack her duds with yours, and come kick a few lunar rocks and see what happens. Two days, then there is always a supply rocket to scoot back on. They're just not as comfortable and it take days to get home instead of hours."

With that said, Harlan left his friend in a daze, and ran to be with his wife. They both started up the ramp.

"Will he come, Harlan?" She was not sure he would.

"Well, if the fire I started under him doesn't do the trick, I'll think of something else. We'll get that man, one way or another."

* * *

As the ship climbed, the sky turned blue, then dark blue. Purple was followed by violet, then finally black. The Earth below them dwindled through as many changes, from taking up their whole view to a blue and white ball far below them, becoming smaller by the minute.

Maggie, Harlan, Bashalli and Tom sat in the newly added observation chairs that were now situated in front of the two

full glass wall of the *Challenger*.

A new, more highly automated flight control system had been swapped in during the past week replacing the outdated systems. It had been in the works for months, but finding the time to install it had been problematic.

The *Challenger* herself finally told everyone she needed help. After Tom's last trip back from the Moon, the ground crew found several badly overheated circuit boards while inspecting the master control panels. These led to data and power lines that went to the repelatron selector controls. After hearing about that, Mr. Swift ordered the *Challenger* be grounded and the refit be done immediately.

The more compact consoles only required half the space, so they had been moved nearer to the back wall, and with more comfortable flight couches. Tom asked that new seats be added for people to sit at the windows and enjoy the view.

"Achieving orbital flight for the Outpost," co-pilot Sandra Barclay informed Captain Budworth Barclay. Bud spun his chair around to face the windows and the spectators.

"I've asked Sandy to reframe from turning on the 'Repel-a-grav' so Maggie can enjoy the full effects of space, it being her first time up. So those of you who don't want to float around a bit—or clean up the aftermath—please fasten your seat belts. That would include you, Harlan." Everyone knew of Harlan's space sickness. He had taken his pills before lift-off, but that did not guaranteed results.

Tom slid from his chair and stood ready to help Maggie if she floated too far away. The 1-G acceleration cut out and anything not nailed down started to drift.

Maggie's eyes nearly popped out of her head with the loss of gravity. She panicked and tried to stand up, letting out a horrible scream as she shot toward the ceiling at a dangerous rate. Tom jumped after her, grabbing one of her kicking legs and pulling her down toward him. When he tried to get a hold of her she went into a fighting rage. She kicked, hit, scratched and even tried to bite Tom as he did his best to contain her.

Harlan was there in seconds. He floated behind her and grabbing her arms above her elbows. He pulled her into him holding her tight.

Meanwhile, Sandy was gradually turning on the repel-a-

grav and lowering them all to the floor. Bud was out of his seat as soon as the three entangled people touched down. He tried to help hold the now convulsing Maggie.

Harlan was desperately holding her head from hitting the floor and seeing that she did not choke on her own tongue. After a few more spasms and she lay quietly on the deck in a quasi state of consciousness. Her green eyes were glazed over and drool dribbled down her chin.

"What happened to her, Harlan?" Tom asked as he slowly untangled himself.

"I really don't know, Tom. Somehow the zero gravity must have upset the balance between the neural pathways and the micro-filaments that are still in her head." But, Harlan knew that was not it.

It was the zero-gravity itself. It must have triggered her subconscious mind back to the eight months she drifted in space. What horrors she experience back then must have flooded back to her mind and caused the panic.

Now Harlan had to wonder who was going to be in control of Maggie's body.

"Sandy, take us back to Fearing." Bud ordered.

"No!" countermanded Harlan. "Get us to the colony as fast as possible and cut the artificial gravity to Luna standard. We can't take the risk of full gravity on her, and we know that zero gravity is deadly to her. The Moon is our only chance."

"Sandy, hold position," Tom countermanded, "and set gravity to one-sixth Earth normal. Bud, get Doc Simpson on the horn and tell him what happened. Lets see what he thinks first."

"But..."

"No buts, Harlan. My ship! We need to talk to Doc. The five minutes it will take won't matter if we kill her. Anyway, if you are right, we can't do more than one-sixth G to get there. Five minutes now can be the most important five minutes of her life."

Tom helped carry Maggie to the small, one bed cubicle that was the ship's infirmary, located on the top deck above the control room. Bashalli followed them and took control of Maggie once she was placed in the bed.

"Go, Harlan," she ordered, "take care of Thomas' scratches and bite marks." She was trying to give Harlan something to do other than stare at his wife. "Then talk to Doctor Simpson, both of you. Come back when we have a plan of action, not before." She pointed out the room, and with a longing look at his wife, Harlan left with Tom at his side to go to the exam room so Tom could get fixed up.

Four hours later a Swift cargo rocket maneuvered next to the *Challenger*. One lone figure left the ship and drifted to the crew air pressure lock to the side of the hanger deck. The man was just closing the outer door when the *Challenger* left orbit and headed out towards a rendezvous with the Moon.

The ship could do the trip in two hours at 1-G, but it took close to fourteen on this trip at one-sixth G. This left Doc Simpson plenty of time to examine Maggie and revise her medical treatment. By the time he arrived at her side she was awake and feeling fine. She could not remember the panic that had seized her mind and turned her into a wild woman.

After a discussion with the Doc, Harlan left his wife and found Tom and Bashalli in the control room gazing at the fast approaching Moon. He could not apologize enough to both of them about what had happened. Tom, smiling, tried to pass it off as first flight jitters.

The conversation quickly turned to the water situation at the colony. With that in mind, Harlan turned on the radio to the colony's assigned frequency.

Quickly he had Saclolo and his wife Magadia, who were acting once again as the directors of the Moon base, on the radio.

"Saclolo, can you and Magadia find the geological survey for the mountain reservoir, including the ground penetrating radar reports, any reports on why that site was chosen, and any blueprints for the project. Actually, get out everything concerning it. Please have it at my desk as soon as possible. We'll be landing in a few hours."

"Harlan," Saclolo happily replied, "it will be good to have you back. Congratulations. We hear that you have found yourself a wife."

Before Harlan could say anything Magadia added, "A high-flying bird named Kenneth sang the news. We are all happy for you."

That *would* be just like Ken Horton to send out the news.

"Thanks, to the both of you. Can you see to preparing the quarters that The Masters used. I think they will be ideal for our guest."

"But, Harlan," Magadia interjected, "that area has been sealed off, and its environmental and power circuit completely shut down. It will take a day or two to heat up and activate all its systems."

"Right. Sorry, Magadia, I totally forgot about that. But I will need it eventually, so if you can at least start the process I would be grateful. In the meantime see if you can find us a place to stay near the hospital unit. My wife will require medical attention, but don't worry. I'm bringing a new doctor with me. Oh, and have my stuff moved out of my rooms and put in temporary storage. Reinstall the second bedroom and turn it back into the VIP suite that it was before I commandeered it."

"Now, *that* I can do for you, Director."

Harlan was about to sign off when another thought occurred to him. "On second thought, we'll stay right in the medical section. I'll also put the new doctor there, at least temporarily. Kick Otto out; we no longer need him. He can find his own place to stay."

Harlan never liked the man. More than just a tribal medicine man from the Philippines, he was the only true doctor and surgeon in the colony; all the other medical personal were med-techs or nurses. The biggest issue was that he never treated the Cadao mountain people with the respect and dignity they deserved. His approach was condescending and often rude.

"Thanks, guys. I know that I'm asking a lot, but believe me, it's well worth it." Harlan cut the connection and turned back to face Tom who was about to burst at the seams.

"Tom, I don't want to hear it." Harlan told him forcibly. "If you save this colony the people here will probably give me a swift kick to the side and make you King." He grinned. "And I will place the crown on your head myself, my majesty."

And Harlan bowed down to Tom, laughing all the time he did it.

Chapter Eleven: Risky Business

THE touchdown of the *Challenger* went smoothly and with only one slight hitch inside. Maggie—she had been released from sickbay by Doc for the remainder of the trip out—began shaking as she looked out the large windows at the lunar landscape approaching from below.

Harlan reached out for her on one side and Doc from the other. Both feared another attack like before and both knew it could be fatal this time. But, after a few seconds she stopped.

“I’m fine. Really. I just felt as if I had seen a bright red ghost rush up to me and shake its fist in my face.” She gave out a small, tingling laugh. “Silly, isn’t it?”

Harlan kept a comforting grip on her hand until the ship had settled on the lunar surface, and Tom announced that they could all get into space suits.

“You know you’re going to have to bring up some sort of airlock and elevator to get things down to the larger airlock for the colony,” Bud told Tom as they were getting into their suits.

“Already talked to Harlan about that, Bud. He would like to see a new landing platform built on the opposite side from the control tower. Something either a supply rocket or even this old girl can land on and then transfer cargo and people via an elevator platform down to a lock.”

“So, how are we getting down today?”

“*Straddlers*,” he replied. Bud’s face brightened at the mention of the small vehicles. “Some of Gary’s men are bringing the four of them up here for us and then settling in the ship while we are in the colony. They, by the way, will be coming back to Earth with us. Gary plans to leave just four of his most senior men here as a ‘just in case’ measure.”

Maggie was having difficulty with her space suit. She squirmed like a small child inside it, and even with the helmet back over her shoulders it was clear that she was experiencing something akin to claustrophobia. Her green eyes had grown huge and the pupils were dilated.

Doc came to her rescue when he offered her a pair of what looked to be rather bulky sunglasses.

“Try these, Maggie,” he told her. “They are sensory replacement glasses. You will see wide open spaces replacing anything that isn’t in a spacesuit.”

“Does that mean she’ll still see me?” Harlan inquired.

“It does. What she won’t see is the helmet around her, the suit on her, or anything of the lunar surface or the colony building out there. She can spin around 360° and all she’ll see is a beautiful and peaceful meadow and flowers that surround her.” He now turned to Maggie who had placed the glasses on her face. There was a broad smile there where before had been a grimace of fright.

“These are magnificent, Doctor Simpson,” she told him in an awed whisper. “Truly wonderful. I can get by with these on.”

Doc had not been certain about what they might encounter when he programmed them so he had nothing to show to her when she mounted one of the *Straddlers* behind Harlan. Now, he wondered if some sort of scenario featuring a horse would have been a good addition.

He had nothing to worry over. Later, she confided in him that she just imagined she was flying with her feet a few meters off the ground. “It was... *freeing!*” she declared.

A contingent of Swift Security men along with Saclolo, Magadia and five other residents met them inside the storage room.

“Welcome back, Harlan,” Saclolo said as he shook the Director’s hand.

Magadia was looking closely at Maggie, a hint of suspicion in her eyes for a moment before she smiled and reached out her right hand.

“And, welcome to Señor Harlan’s wife,” she said.

Tom, Bud, Sandy and Bashalli would be sleeping in the *Challenger*, but were each provided with a pocket device providing interactive maps of all the colony along with a ‘You Are Here’ feature. They followed along as the greeting party led everyone through several corridors to an elevator down. At the bottom they got out and walked along several additional corridors.

“Golly,” whispered Sandy to Bashalli, “I’m glad we get that map-o-matic thing. I’m already lost beyond all hope!”

Under her breath, Bashalli whispered, “Left, left, right, right, left, up, right, right, left, straight. That’s backwards from what we’ve done so far.”

Sandy stopped for a split second to start in disbelief at her best friend and sister-in-law. “Bashi, you’re a wonder!”

One more right turn brought them to the end of a hallway and to double doors. At the touch of a sensing pad to the right side, both doors swung inwards revealing a large room that was obviously a hospital.

“This,” Harlan announced, “is our medical facility that Doc will take over. There is a set of living quarters over there,” he said pointing to the far left wall, “where Doc will have the Chief of Operations suite and Maggie and I will take the medical VIP suite next to him.”

A short tour of the hospital facilities proved to be an eye opener for everyone. Fifty beds, complete with retractible soundproof partitions, were arranged around a set of five central nursing stations. Each station and its ten beds could be, Harlan explained, completely sealed off in case of contagion. Only eleven beds appeared to be occupied.

Doc walked around as if in a dream—his wildest dream come true.

A scowling man with the appearance of being part Filipino and part Caucasian walked up to them.

He was introduced as Dr, Otto Ocampo, the former head of medicine at the colony.

“I see it took you no time at all to undermine me,” he stated to Harlan with obvious venom in his voice.

Harlan was about to bark at the man when Doc stepped forward.

“My name is Gregory Simpson, M.D., and I have been brought in to see about starting a teaching university up here. As such I will require that someone with a good knowledge of medicine and surgery in this low gravity be available to me. It’s my intention to replace your current position because it is easier to do that than find someone with your credentials for the school. I do hope you will consider this an advancement and not a demotion, sir.”

Dr. Ocampo eyed Doc warily before nodding. “I see. Then, and subject to the start of this university, I accept. With the proviso that I be allowed to return to the Earth and to locate

a couple other teaching surgeons who would be willing to locate up here. Is that a satisfactory proposal?"

It was soon agreed on, and Ocampo left placated, if not an actually happy, man.

"That went easier than I thought," Doc said, smiling.

The following day Tom and Bud expected an early start and dragged the girls out of the ship and to the upper dome's cafeteria before seven a.m. For convenience, Earth time—identical to the zone in Shopton—was used at the colony. Being underground meant that the artificial suns and all lights could be set to approximate any time.

Tom was disappointed when Harlan did not show up while they ate. A little after eight Doc came in to have breakfast and joined the anxiously waiting group after half-filling his extra large mug with black coffee.

"Harlan should be here in a few minutes," Doc informed them. "Maggie had a migraine most of the night and he stayed up with her. He called at four this morning and I found him with her in his lap on the couch in their family room. You would think," Doc laughed, "with a doctor in the next room you might seek his help sooner. I don't know who was being the most stubborn about not calling me. I gave Maggie some medications, and sent both of them back to bed after I promised Harlan to get him up at seven. Which, you can tell, I did not. So, he may be a little grumpy when he gets here."

Doc was watching the entrance to the cafeteria as he spoke. A moment later he spotted Harlan coming in.

"Got to go, folks," and he ducked into a passing group of people and disappeared.

Harlan had hints of black lines under his eyes. Before he could say anything, Bashalli spoke up. "Sandy and I will check in on Maggie from time to time. We know that you are going to be very busy with the boys."

Bashalli took Sandy's arm and tugged on it, starting to get up. Sandy had no choice but to follow.

Harlan smiled as the two women left. "Tom, Bud? I have to tell you I miss the closeness you have with each other and the understanding you get from your ladies. I'm sure that Maggie can use the company." He pulled up a chair and turned it around, straddling it backwards.

"I have a little bad news, Skipper. No files have been found for the mountain reservoir. I'm hoping that can be amended with 'Yet' but I'm not going to fool you. Either the Masters, or possibly their mining engineer, Gustavsson, had them destroyed or hidden somewhere. Saclolo and Magadia practically tore the Administration offices apart and came up empty handed." Tom only shrugged his shoulders and let the disappointment pass without a comment.

Harlan led Tom and Bud around showing them the various facilities of the colony. Their tour included both one of the fully-functioning water reclamation and purification plants as well as the one in the upper dome that was still seeing an ever-dwindling flow.

It was down to under 830 liters per minute and dropping by nearly 11 liters per day.

"We really need to get that one plant back to full form, skipper," Harlan admitted, "or else we will need to begin stealing water from the other parts of the colony. Well, that plus find out why we are losing more water than normal!"

One of the pieces of equipment Tom brought up in the hangar of the *Challenger* was an echo location robot. Something like sonar with a little ground-penetrating RADAR thrown in, it could provide a 3D view of large areas of whatever was underground.

With it unpacked, Tom carried the lightweight unit into the malfunctioning pump room.

"It works something like one those automatic floor-cleaning and vacuuming robots," he explained to Bud, Harlan and Saclolo. Not seeing recognition in the Filipino man's eyes he explained. "Basically, it starts out in a straight line until it senses something it might bump into. Then, it begins to devise a way around that until it finds another straight path to take. It remembers exactly where it has been, what it found, and then avoids that the next time it passes through the same area."

He described how this room, the approximate size of two basketball courts, and with the maze of pipes, pressure vats, and other equipment, would probably require three hours to "learn."

"After that, it will start a sweep that gives the best coverage using the least amount of movement. During that it will record what is going on down to the depth we set it to."

He turned to Harlan. “So, how far down can we go before encountering the next dome or populated level?”

Smiling, the Director replied, “Under this? All the way to the other side of the Moon if you like. Nothing was built directly under this part of the colony. The Masters claimed to be afraid someone might plant a bomb under them, so they made certain it would be impossible.”

Tom decided to go for the deepest penetration of two hundred feet on a second sweep; the first one would go only to a depth of about fifty feet.

“We can set it and forget it,” he told them, but his companions were so fascinated by the machine that was only about four inches thick and about two feet in diameter. Also fascinating was the total lack of any visible wheels or treads.

“What if you wanted to use it out on the surface, skipper?” Bud asked.

“Once I turn it on a set of seven treaded wheels extend down around the perimeter, Bud. It *can* float on an air cushion, but that cuts operational time by a third.” He set it in motion.

A half hour later the newness had worn thin and everyone left the room.

Four hours later, as the “Earthers” sat in a small lounge having a late lunch, Tom’s belt pinged. He reached down and touched a button on a small box.

“The first search is finished. Anyone want to come with me to download the results?”

Bashalli raised her hand. Bud was about to until Sandy grabbed his wrist and gave him a small shake of her head.

“Guess you two are on your own,” he said with a smirk.

Now with a much better understanding of the layout of the dome and its multitude of corridors, Tom took Bashalli by the hand and led her around to the doors of the water plant.

Before they went inside, she took his face in her hands and gave him a long kiss.

With a grin, he asked, “Why the big smooch, not that I minded it?”

She smiled. “Because I have not had the chance to kiss you for nearly two days and I was starting to believe your lips

might not work in this low gravity!”

He kissed the tip of her nose and opened the door.

Tom let out a cry as he saw the dark-skinned man with a large sledgehammer smashing into the echo locator.

The man spun, spotted Tom standing in the doorway, and charged at him, the tool of destruction swinging around his head.

With Bashalli to take care of, Tom was in an immediate position of weakness. To top things off, on hearing his cry, she had ducked partially under his arm to see what was going on.

Finding speed he could never have matched on Earth, Tom spun to his right taking his wife with him. He gave her a shove sending her to the ground and into the corner of the hall. Still spinning he came back to face the would-be attacker. The man was only five feet away, but as he swung again the weight of the hammer pulled him off balance giving Tom a clear shot at his midsection.

Wishing that Bud were there, Tom lowered his shoulder and launched himself into the man’s left side.

With a mighty *ooff!* the man folded nearly in half, and there was the satisfying sound of at least one rib snapping. The two men fell into a heap with the Filipino starting to howl from the pain, but still fighting to escape. He kicked Tom and as the inventor tumbled away, the man rose to his knees to attack again.

That stopped suddenly as Tom rolled to a stop. Standing over them both was Bashalli, the sledge hammer head held in her hands.

“What happened?” Tom gasped at her.

“I hit him with the wooden part. He was attacking you, Thomas. I had to!” She dropped the weapon and tears came to her eyes.

He got up and hugged her. “You did really good, Bash. Really. Probably saved both our skins.” Tom took the small radio from his belt and called Bud. He told his friend what happened.

“Get Harlan and Saclolo and some of Bradley’s men down here. I’ve got to see if there’s anything salvageable of the locator.”

By the time the nine people responding got there, Tom had managed to find several wire ties in a storage locker and had the prisoner tightly bound. He turned around at the sound of the approaching footsteps holding a small semi-circular piece of plastic in his right hand.

On seeing the prisoner, and his clean un-torn clothing, Harlan swore. He said a few additional choice words before explaining to Tom, "He's one of the Elite. The former kow-towers to the Masters. I didn't think they had the guts to engage in acts of destruction. We've never known the extent of them and he's someone I don't recognize." He turned to Saclolo. "Do you know him?"

Looking confused and shaking his head, Saclolo admitted he did not know who the man was. "Whatever he did for the Masters," Saclolo admitted, "had nothing to do with the slaves. He must have been one of the last ones up from Earth. I will check on who he is and what he does for the colony."

"I was afraid of this," Harlan said. "I've had the notion that the old Masters had a nest of these vipers hidden away. We thought we'd gotten the Elite under control—gave them the choice of staying and playing by our rules or going back to Earth to face enough charges to send them to prison for the rest of their lives. But, here's someone who obviously slipped by. How many more?"

Tom had not been listening to the exchange. His attention was focused on the partially destroyed machine and the memory module he had pulled from its socket. He now stood up.

"I'm fairly certain the unit is a lost cause, but I'm also pretty sure we have an intact data core." He held the three-inch-wide piece up. "If you can take care of this and post a guard, I'm heading back to the ship to see what we have."

Doc Simpson had arrived in the middle of Harlan's tirade. He quickly spotted the rising bruise on Bashalli's arm and the scuff on her upper right leg. He had taken her to the side and they were having a quiet conversation.

"I'm coming back with you, Tom," Doc informed him. "Bashalli might have a small fracture, and I need to get that inspected."

"Yeah, and it will be safer. Besides, if you have to put her arm in a cast she might not get her suit on and be stuck

here.” He winked at his wife and bent down to touch her cheek. “I’m sorry to cut your visit short, but I need you out of harm’s way and healed.” As he helped her to her feet, he added, “And, I’m sorry for the shove. I could only think of that one way to get you out of his path.”

Harlan intercepted Doc and took him aside.

“Maggie is having more terrible headaches. They’re not like migraines, but she’s suffering. Is there something you can give me to give her?”

Pulling his medical backpack around and unzipping the largest compartment, Doc asked, “Can you describe them to me? There are several things I can give you, but the wrong ones will only be effective in the short run.”

“Hmm. Well, she says they are right in the middle of her brain. I asked if they were where the fastener was and she says, ‘No.’ I’m not certain she is the best judge right now because she is in so much pain. The one thing I know is that massaging her scalp is no help. Same thing for neck and shoulders.” He looked helplessly at the medico.

Doc rummaged around and found what he was looking for. “Here,” he said holding out something that looked like a nasal mister someone with hay fever might use.

Harlan took it, but looked skeptically at Doc.

“That,” Doc assured him, “is a powerful combination of a vasodilator and pain killer. It works best when applied as close to the source as possible, and that happens to be up the nose.”

He thanked the doctor and left. Doc briefly told Tom and Bashalli what had just happened.

“It is not a good thing?” Bashalli asked.

“Well, it isn’t good or bad, but it is something I need to get back inside here to take care of.”

The three of them headed to the airlock storage room and were suited up and outside minutes later. Tom had cringed when he saw his wife wince as she was inserting her right arm into the suit. It nearly brought him to tears thinking that her injury had been at his hand.

Inside the ship, Doc took charge of her while Tom—after several kisses and much apologizing—headed to the control board and it’s data port.

By the time Doc and Bashalli came back down, she

sporting a sling but no cast making Tom nearly sag with relief, he knew the data storage unit had been spared.

“Come look at this,” he suggested to the other two.

“As mother Swift would say, ‘Oh, my!’ ” she exclaimed.

Doc saw the same thing and let out an appreciative whistle. “Is that what I believe it is?”

“Well, if you think that thing is a previously unknown pipe leading down into the ground, then yes. Also, if you think that shadow at the bottom is nothing but empty space, then I’m certain you are correct, again. I think that’s a giant cavern under the dome.”

Pointing back to the supposed pipe, Bashalli asked, “But, why would they build in that pipe? It appears to go nowhere.”

Tom sat back. He rubbed his jaw a moment before answering. “Somebody perhaps thought there might come a time when they needed to sabotage the water system. It makes me wonder if the other domes and underground facilities have similar, umm, drains.”

He pulled on the headset of his PER and keyed the microphone. He sent the *Challenger* upward, high enough to provide a direct link to the Earth. A minute later he had a channel. “Tom to Enterprises. Come in, please.”

Eight seconds went by before a familiar voice answered. “Enterprises. Old man Dilling here, Tom. What’s going on up there?”

“George? Why are *you* manning the radio? Don’t you have management stuff to be doing? Like lunch or something?”

The all heard the returning laugh. “I have to keep up my radio certification with the FCC, Tom. Believe it or not, I pull two eight-hour shifts a month for the privilege of paying three hundred bucks a year for my operator’s license. So, what can I do for you?”

Tom related the findings in the water station but did not mention the attack. “We had a bit of a problem and the echo locator got damaged. Can you have dad sent up two more, with extra data modules, as well as seeing if he can pull out my little Geotron from storage? I need to do a bit of tethered exploration of what’s under the colony and that seems to be the way to go.”

George promised to relay the message and to get back to

Tom with a timetable.

“I’m sending Bud and the ladies back down tonight,” the inventor reported to his Chief of Communications. “Then, if things can be arranged, Bud will come back up tomorrow morning with the equipment. Thanks, George!”

Tom cut the call and set the ship back down.

“What if I do not wish to go back home?” Bashalli asked, her voice trembling a little. She hated the idea of leaving Tom in a time of trouble. She was his wife, and whatever he faced she wanted to be at his side.

He turned to face her and took both of her hands. “Bash, until we can be certain it is absolutely safe up here, I want you and Sandy back home where it will be. Later you can come back up. Maybe in a week or so. Okay?”

She shook her head but said, “Yes.”

Bud returned thirty hours later with everything Tom requested along with eight ERBs and a special motorized hoist Damon Swift added along with a note:

Son,

In case you forgot this, you will need something to attach to the Geotron model to get realtime video back up and to retrieve it in case it breaks through anything.

Love, Dad

Tom chuckled on reading that. *He does think of the bigger picture*, he thought to himself as he moved things to the front of the hangar to be taken outside. He was soon looking at the trio of four-man *Straddlers* that had been carried up in the hangar.

Tom hadn’t asked for them, but Damon must have figured out the current two-man models might not be sufficient for some uses. He must have given the go-ahead on those the day the first ones were delivered.

He and Bud packed up the back ends of two of them with all the equipment they could carry and then Tom aimed his Attractatron at the Geotron model and picked that up.

He would send up a team to retrieve and set up the ERBs, currently stored on the porch surrounding the central cube, later. They were too long to fit inside.

His full-size Geotron was originally built for sub-ocean

travel. By literally shoving aside the wet sand, rocks and mud using repelatrions, it could maneuver through things at a rate of up to two miles per hour. That wasn't quick, but it hadn't been meant to be. The slow speed offered some level of protection from accidental penetration of empty space and let those inside have an excellent view of the materials surrounding them.

The model was about fifteen feet long and could do about a third that speed, but it was going to be running slower than that up here.

He backed his *Straddler* out of the hangar taking the model out with him. With their slightly more powerful repelatrions, these larger vehicles could easily handle the weight of the loads they drifted downward with.

A scant hour after the *Challenger* landed the next day, Tom and Bud, along with a Security detail of three of Gary's men—none of them had gone back to the Earth following the attack—were standing inside the processing room watching the new echo locator maneuver around.

It didn't take long to get oriented. Luckily, Tom had been able to download the details of the room from the memory module into the new unit so it only had to move about ten feet in several directions to compute where in the room it was.

This time, the search depth was set at maximum.

Harlan entered the room as the machine rolled away to perform its survey.

"I've asked around and nobody seems to know, or wants to tell me, about that pipe. But, from the images I've seen I can see where our water flow problem is. Everything was balanced so the flow depends on the total amount of liquid in the system. Leak a bunch out and the flow drops." He now looked seriously into Tom's eyes. "Is there any way in the world to get that water back?"

Tom shook his head. "I don't think so, Harlan. But, I might have some good news assuming my calculations are not completely off base!"

Harlan inquired what that might be, but the inventor asked that the subject be tabled, "At least for a few days or a week. I've got both you and the entire state of California to worry about now."

The results of the deeper scan showed that the possible cavern below was deeper than the echo locator could “see.”

“And that, folks,” Tom announced at dinner that evening, “means that I need to do a little tunneling with my Geotron.”

“What will that give you, Señor Tomas?” Saclolo asked.

Having earlier explained what the model could do, Tom now answered, “It features some very precise measuring capabilities along with a video system that uses a type of light I created for use underwater. It can shine for miles, so I think we will easily be able to tell how extensive the cavern is.”

Harlan was sitting looking a little worried.

“What if you discover that it undermines the entire colony?”

It was a simple question that brought everyone’s thoughts to a standstill. All heads and eyes swung to Tom.

He slowly shook his head. “First, I don’t think that is possible. If the cavern was naturally created by some form of gas that was trapped inside the semi-molten surface, then it is going to be nearly a sphere. At least, that’s what physics says. And, since it begins at a higher level under this dome than the adjoining spaces, I don’t believe it can be under them as well.”

What he didn’t say was that where there was one gaseous bubble from the Moon’s distant past, there could possibly be more. Dozens or hundreds.

And, who knew what dangers *they* might pose?

Chapter Twelve: Night Moves

EVERYTHING Tom knew about the physics of comets told him that his scheme—at least to capture and bring one into near-Earth orbit—was not just possible, with the situation on the Moon and in California, it was rapidly becoming mandatory.

Harlan's earlier description of the never-completed mountain reservoir, combined with the discovery of a leak in the processing facility, pointed a direct finger at the need to do it quickly.

While his father had suggested gathering several smaller ice-laden objects from either the orbit of Jupiter or from the asteroid belt, he had spent a solid week scanning the skies using his most powerful telescope up at the Outpost. And, it hadn't been necessary to even fly to the geosynchronous orbit locale of the space station. The newest version of his PER(d), or Private Ear Radio (data), was designed specifically to support a massive downstream of digital data.

In this case, the data had been 1,200-dpi images seen in almost real time on either the 100-inch monitor in Enterprises' Communications building, or even on his somewhat smaller high-resolution monitor in the *Challenger*.

The search paid off on day two.

Only visible from the vantage point of the Outpost and with its angle of view only one degree below the giant Jupiter's atmosphere, he calculated it to be a comet of some one-hundred miles in diameter. A refractory laser probe showed it to be completely covered with that specific combination of hydrogen and oxygen that is *water*.

In another week it would be visible to the rest of the astronomical world; he had the advantage of the high orbit of the Outpost on his side for the moment.

Currently, the solar radiation from the Sun was starting to cause a minute tail to form, growing slightly with each passing hour.

Still several hundred millions of miles out, as it dipped under the orbit of Jupiter, the huge object hit the solar radiation and began 4

at a rate of a quarter ton per minute, but Tom knew it as so massive this could go on for a thousand more years. It would barely lose a quarter of one percent before he might grab onto it. Once in the grip of a flotilla of his Attractatron mules he could control its speed to the point where loss would be kept at an absolute minimum.

He also figured to use the shadows of Mars and the Earth to shield it from increasing solar radiation. By sheer chance both planets were coming into close alignment so this would be possible.

In the meantime his ERBs were finally in use in the lunar colony. With the most water being used in the giant farming domes those had been the natural locations for a pair each of the tall, stainless-steel towers. By exposing their solar energy cells to the man-made sunlight, energy was produced to chill the cylinders to about thirty-five degrees, moisture streaming down them into the collectors and then made available to the workers to drink.

The recent attitude of desperate surrender was quickly replaced by joy.

* * *

Once Tom made good his promise to bring the girls back to the Moon, Bashali lead Sandy to the medical complex. Twice the blond wanted to make right turns when Tom's wife knew they needed to go the other way. In the end she simply took her sister-in-law by the hand like she would if leading a small child around.

Sandy, now feeling completely turned around, meekly followed.

It seemed weird visiting someone in a hospital who was not a patient, but living there. When she mentioned this to Sandy, she got back, "Well, just think of it as visiting a new friend to sort of make her feel she isn't forgotten when we're around. Happy to be in the neighborhood, even if it isn't our neighborhood. It's not like she's contagious or anything, Bashi!"

Upon opening the medical unit's double doors the girls found an empty reception room, or so they thought. A brief second later they heard a soft curse word coming from an alcove behind the main desk used by the receptionists to take patent information.

The voice sounded familiar, so they went to see who it was. They found Maggie just starting to pound on the computer keyboard, and her words were getting louder. And harsher.

"Maggie," burst out Sandy, "what's the heck going on?" Both girls were trying not to laugh, for they were fairly certain they knew what must have happened.

Maggie looked up at them in surprise. The corners of her mouth turned downward into a frown. "I just can't do it!" she yelled and burst into tears as she rose and tried to run out of the room. She couldn't. Bashalli was standing in the way and although not a large young woman, she outweighed Maggie by at least forty pounds. With nowhere to go Harlan's wife stood there trying to hold back her tears.

Quickly and gently Bashalli took Maggie by one arm and Sandy stepped over and took the other. They walked her back to the suite, sat her down, and got her a cup of water. Once she calmed down, Sandy asked what happened.

"About ten minutes after Harlan left this morning, Doc came back and asked that I sign into that blasted thing as a permanent resident so they could start a medical file on me. He took me to that room and started to fill out the forms for me; I've never used a computer before. I know about them from my reading, and watching Doc doing it, it seemed simple enough."

She looked at the other two women and shook her head. They both noticed the little wince on Maggie's face.

"Doc was called away just as we reached the last page. He said all I had to do was read the page, check the box if it was right and sign it. I checked the box and there was a pen thing on the table so I started to write my name in the space on the screen... and the whole thing went crazy. I didn't know how to stop it and it kept flashing 'ERROR' all over the screen. I think I broke it. It was making me so angry."

Sandy and Bashalli looked at each other and smiled. Bashalli spoke first. "Computers tend to get most people angry, and as for breaking them, only if you throw them out the window, which you cannot do here."

"If you like," Sandy added, "we'll show you how to fix it, and we'll start giving you the basics on how to operate a computer. These days it's sort of necessary. Do you type?"

"Oh, yes," Maggie happily told them. "I know you need to touch each key one at a time, using one finger, just like Doc did. And, I guess they are in that order because of some good reason, but it makes finding the right key hard sometimes. I kept finding the ones I wanted hiding under my fingers!"

Back at the computer station, a quick press of the **ESCAPE** key got things back on track, and it turned out that the pen she had tried was a real pen and not the electronic stylus sitting in its little clip at the back of the keyboard.

That night Maggie slept peacefully.

The following morning Sandy and Bashalli had to go back to Earth with Tom and Bud, leaving her alone most of the time because Harlan had his hands full in Administration, attempting to get things back to normal.

Before departing Sandy showed Maggie how to use the computer in their suite to bring up entertainment. There wasn't much—the Masters had not believed it necessary—but there were books and a few older films.

The migraines came back that night and after consulting with Doc, he put her on a new regimen of medications. This time a Triptans-based nasal spray that she could use at the onset of head pain, or the start of the throbbing sensation. Because a blood test showed her body's uric acid levels to be alarmingly high—something that could bring on migraines—he prescribed a daily pill to reduce that.

He also noted that she had close to zero symptoms when she had been busy with the girls, so he suggested that Harlan find her a job to do while he was at work, even if it was part time.

Harlan liked the idea. Together they went to the office of the Secretarial Pool, and Harlan introduced her to Clyde Yeats who ran everything. Due to her inexperience Yeats enrolled her into two of the self improvement courses that were available to all the colonist. Typing and computer tutorials were top on her list.

As they passed through the reception area on the way back to their rooms they ran into Doc carrying an arm load of files he seemed about to drop. Maggie grabbed some of them, kissed Harlan goodbye, and went off with the doctor to help him. At the same time she started to telling him about her forthcoming training.

Maggie very seldom had the migraines during the day.

Mostly they came at night, and she tried desperately to hold off taking the nasal spray if the discomfort was not bad. Doc wanted her to use the spray at the first sign of symptoms, but the side affects seemed sometimes worse than the migraine itself.

She felt that she was loosing hours. One minute it was 2:00 a.m. and the next it was 4:00, or even 5:00. The oddest thing was that once she became aware again, she was rarely in bed, but in the lounge area or some other place in the suite, and even once outside of it.

Within several moments of “waking up” the lost time sensation would disappear, and she forgot all about it. Harlan only noticed her restlessness the first week, then—exhausted from his all-day work and part time early morning vigils for her—he slept throughout the night, never missing her from his side.

Maggie really liked helping out in all the different sections in the colony, and gladly took on every one or two day secretarial, filing clerk, or any other menial office work that no one wanted to do. Within a few weeks, she would be considered one of the best workers in the pool, rapidly moving up into the Administration’s secretarial pool when needed.

All the time she worked, she was watching, learning *and remembering*.

Looking down at Harlan asleep in the bed still made the Empress angry. She slipped the fake nasal spray back into the drawer where Maggie kept her medicines. What was one more bottle among so many? This one was not recorded in her med files. Only she knew of it.

Within days of starting to help Doc, Maggie had memorized the computer codes for the entire medical section, and most importantly, those for the pharmacy. Then, she moved on to the codes for many other places.

The Empress was willing to pay the price of being Harlan's wife... for now. She did not realized that she was the interloper, and not Maggie. Even though she had access to all of Maggie's memories, she did not live them.

The Empress only had the hours in which the Triptans nasal spray freed her from the backwash of Maggie’s subconscious. The lateness of the night suited her nocturnal nature.

When the Empress first gained control in the middle of the night, she was too bewildered to act on it. She found herself in bed with Harlan. He had just drifted off to sleep after an hour of passion. The Empress felt sick and repulsed by their love making. But, at the same time she remembered the joy and union of it.

This was something totally new to her. She had never let her body be used by anyone. But this... with Harlan, it felt so... She fought it and dismissed it from her mind. At least for the moment. She would take her revenge on him when the time was right, and he would pay for every time he touched her.

The next time she found herself freed, she slipped slowly out of bed and went to the suite's hand held 3-D projection computer. Harlan found her there typing away at the table, but he couldn't see the screen. When he inquired about her being up, she laughed and told him that she had been interrupted just before she was going to save some material she was typing on at work.

“By the time I was able to get back to it all I saw was a blank screen. So I left work hoping I had somehow saved it without thinking. Just a little while ago I woke and realized that I hadn't. Luckily it was still there waiting for me to finish, which I just did.”

He accepted the explanation and wandered back to their bedroom.

In reality she had been looking over the Pharmacy's sleep-inducing drug list and the many ways they were dispensed: pills, liquid, or in mist form. She also had to put in a prescription for an order that no one would notice.

All drugs for the colony were compounded by a computer-controlled robotic system. Even delivery of the medicine to the patient was done automatically, and tracked with unerring efficiency. With the special codes that she had picked up, it was an easy process to get around. Security programs for the computers, other than individualized sign-in codes, were almost nonexistent. Drug crimes at the colony was close to zero. The high crime rates were in violence, or of a “violent passion” nature.

The next few days and nights were extremely long and Harlan slept only a few hours whenever he could take a little time. It seemed that some of the people in the colony were not happy with the idea—or the reality—of Tom's repelatron

gravity. The first two sections where in had been installed in the residential dome were quickly sabotaged. The emitter grids had been literally ripped from the ceilings. The work was redone, and Harlan personally sat watching the hidden camera's live feed.

It was on the third night of his vigil that the cameras caught the vandals. It turned out to be two fourteen-year-old boys who believed the repelatron rays were going to cripple them for the rest of their lives. That somehow they were going to be squeezed into shorter people.

Harlan released them to their embarrassed parents and sleepily made a mental note to have a talk to all the children at school, amend that, to all the residents of the colony, about the reason for the need of the increase of gravity.

Once back at the suite he found that Maggie was not in their bed. A little worried, he asked the computer to locate her.

"Sorry, sir. She is not in any of the domes. Should I check if she has gone on an excursion to the surface?"

"Dismiss inquiry," Harlan told the machine. The idea she would be outside was ridiculous. He sat down in the living area in the dark, and waited for Maggie's return.

She was quite pleased with herself. With Harlan gone one night she was able to complete the secret order to the prescription computer and had it delivered right into her hands in Doc's office just two doors down from her rooms.

The second night she chanced a walk to the auditorium-sized public meeting hall. It had bene the throne room where she and her brother held court. The raised platform was now a stage and groups of colonist held plays there from time to time that many people enjoyed.

It was the solid wall behind the curtained back wall of the stage that the Empress sought. Inlaid in the abstract mosaic design of the wall was the release for a secret passageway to the hidden quarters she once shared with her brother. No one really knew where they stayed and slept at night. Their secret quarters had several hidden passageways which opened into the various known mini palaces that they kept and used randomly. The twins knew the people of Shangri-La both dreaded and hated them, so they always feared for their lives.

If anyone entered this passageway a full body scan was

performed and certain unmistakable markers had to be met. Should the security system fail to recognize her, she would have been gassed and the body disposed off with no one knowing it.

The system acknowledged her presence and turned on the control screen built into the wall. The screen showed that none of the passageways had been breached during her long absence, and that the quarters were still secured and functioning at one hundred percent.

Knowing that she still had her base of operation and that all the secret monitoring devices were still available to her made the Empress quite happy. Now, she could start to ferret out the Elite and see who was still loyal to her.

Before she shut down the computer, she did one other thing. She programed in an excuse just in case she was ever caught away from home by Harlan.

On that night when she walked in and found Harlan waiting, she froze on the spot. The Empress was caught totally unprepared for a confrontation since she was mentally arranging her list of the people that she needed to have back to carry out her agenda, the one that would lead to her eventual return to the throne.

"Harlan!" was all she could say. He just looked at her for a moment, then got up and stood directly in front of her and looked into her green eyes. She flinched and stepped back. She took his hand and in a shaky voice, "What's wrong? You frightened me." Tears filled her eyes.

"Where were you?" he asked in a whisper. There was curiosity and anger in his voice. He wanted to grab her by the arm and shake the truth out of her. "I came home and couldn't find you. The computer locator could not find you either." Harlan's voice was on the verge of cracking he was so tense.

"I had a bad migraine that the spray did not help. I went out to find Doc, and he was busy on an emergency. So I went to the sensory room and did an immersion therapy session. The isolation usually helps. That whole area is sealed off from any outside interference. No outside electronics work to disrupted the treatment." She hoped it would be enough explanation but could see that he was not totally convinced.

"Look!" Maggie picked up the computer pad, and called up her session in the therapy room. The screen showed her

logging in and out. It even had a video of her arriving at the faculty.

"Oh, God, Maggie," Harlan choked out as he pulled her into his arms. "I'm ashamed of myself. I don't know what I was thinking."

Maggie hugged him back. "You were just thinking of me, that's all."

Harlan pulled away and looked at her face again. He could see that she was still in pain.

"Didn't the therapy work?" He was now concerned about her well being.

"A little, but I left a message for Doc to see me when he has time. Things are getting worse instead of better. I hate to say it, but at times I don't remember going places. I blink and just find myself there. I'm frightened, Harlan," she told him as she clung to him.

"Don't be, Hon. Doc will find out what is going on and fix it. That's what he does."

"I hope so, I truly hope so," she repeated with tears in her eyes.

If Harlan or anyone had been standing behind him looking at her face, they would have seen no hint of sadness, fear or even remorse. All her eyes would have shown was fierce determination and anger.

* * *

Phil Radnor walked into the large, shared office without knocking.

"Take a look at this," he told a startled Damon, dropping a piece of paper on his boss' desk.

CNN news flash—Today, posted across all social media sites, this warning appeared:
"Tom Swift will rain down destruction onto California"

E∞

Damon looked at his Chief of Security.

Phil shrugged. "I've got absolutely no idea!"

Chapter Thirteen: Easy to Start, But How to Finish?

ONE of the first things Tom did was find and shut off the drain valve beneath the water processing plant and then to lock the control wheel against any further attempts to open it.

But, as he was basking in the congratulations from Bud and Gary an hour later, another thought hit him.

Why, if this really *was* sabotage, had anyone only turned the valve a little bit—perhaps one turn of the thirty it might have been—so that the leak was slow. Surely, if damage was intended the culprit would have opened it fully to send out the maximum amount of water.

That puzzle niggled at him all evening.

It was still on his mind the following morning as he and Bud sat drinking coffee. This was more difficult than on Earth. More than once the flyer had to stop to wipe up coffee that had flowed up the side of his mug and sloshed over the brim.

“I keep telling people to only fill up half way,” Harlan said as he approached them. “The low gravity lets it move up and out where stronger gravity back home keeps it down and inside the mug. Take a look at this, Tom.” He handed the inventor a document of three pages.

The first thing he noticed was that the pages were held together in the upper corner not by a paper clip or even a fold-over, they were attached as if melted together.

“How?”

“Ugg, and other stereotypical movie Indian talk to you, Tom. But, I’ll assume you are asking about the pages. The Masters understood that space and weight would always be a premium and so they hired a scientist to devise a way to fuse wood fibers together so they wouldn’t need to bring up a ton of metal clips.”

Bud reached over and felt the pages. “These don’t feel like paper,” he observed.

“No. They don’t and they aren’t. The scientist failed, was paid off and went back to Germany. What Tom has in his

hands started life as lint from the air recirc system. That gets mixed with a combination of used sheets of the same stuff, and a micro-filament polyester. All that gets chopped, ground, mixed, bleached with ultraviolet light and extruded into new sheets. Those *do* take to the German's fusing technology."

"This is pretty incredible, Harlan. Where did you find it?"

Harlan chuckled. "In a locked storage room in a file inside a drawer marked *pas terminé*."

"Paws what?"

"It's French, Bud, for 'not complete.' There are a few dozen sets of pages regarding things the Masters either started and did not finish, or planned to do in the future, but..." Tom handed the pages to Bud who scanned them quickly. "As you can see, this very much has to do with the current situation."

Bud set them down and his gaze went from Tom to Harlan and back again.

"That," Tom stated, "tells me almost precisely what we will find when we send out the Geotron. A great big pocket the Masters and their engineer—who was it, Harlan? Gustavsson?"

"His name was Sam Gustavsson. He was the miserable son of a—" Harlan stopped and took a deep breath. "He was the person on the *Genghis Khan* where I was being held at one time whose fate was sealed along with a number of good men while trying to force them back inside as they worked in the asteroid belt before the Emperor slammed the door on them."

The last came out like someone spiting out a bitter pill.

The document indicated that Gustavsson had realized the first reservoir was never going to work so he devised a plan to construct a huge, protected reservoir under the main dome that would, once completed and the Master's plan to wreak havoc on Earth finished, be filled with water stolen from the planet.

"When he died that left nobody who could take on the completion of that engineering feat," Harlan conjectured. "So, we're left with a giant hole down there and nothing to put in it!"

“It does explain the pipe going part way down, though,” Tom said as he stood and stretched. “My guess is he intended to finish the reservoir and then dig up to the pipe, turn it on, and let water begin to fill the space. Which might not be a bad idea at that.”

“Good, old Sammy G,” Bud said sarcastically. “Let’s name the big hole for him.”

“Perhaps not a completely bad idea, Bud,” Tom said. Turning to Harlan he asked, “Can you get your top people onto a search for anything else having to do with the original, or even subsequent, geological surveys of this part of the crater?”

Ames promised to get on that right away and left the two younger men. He headed back to the offices he and his aides occupied.

"Saclolo, can you and Magadia find the geological survey for this entire crater, including what is suppose to be under this dome. It seems we have a secret cavern down there, maybe even the new reservoir. And have you located any reports on why that mountain site was chosen originally, or any blueprints for the project?"

"Harlan," Saclolo replied, "I barely have heard of such a project, but if there is information to be located, things will be done as you wish."

* * *

With the search for additional information ongoing, Tom and Bud left the colony that afternoon to go back to Earth. As they headed outward, Tom asked his friend a question.

“If you had to come up with a way to get a huge amount of water onto the Moon, what would you do?”

Bud blinked several times. He hadn’t expected to field something along those lines.

“Erm, well... uhh. Okay,” he said gathering his thoughts at last. “You’ve always told me that comets and lots of other chunks of stuff up here, all racing around, contain a lot of things. Water is one of them. Right?” Tom nodded and suppressed a grin; he was pleased Bud was on the right track. “Okay, so we go out, lasso a comet, maybe taking old Chow to do the job, and haul it back. Then... shoot! I’m not sure what happens then.”

“Well, I’m proud to say you’ve come up with the way I

believe we may actually be doing this. There could be a few, well, refinements. For one, I think the idea of Chow with a hundred mile long lariat sitting astride one of the *Straddlers* making whooping noises and trying to get a loop around a comet is the thing of comics, but basically that's what we have to do."

Bud sat in silence while Tom explained how a comet was due to be coming their way in the next month, and that from a previous pass through the area astronomers had determined that it was most likely a hundred miles wide and composed of up to eighty percent ice.

Bud nodded all through Tom's explanation but it was clear to the inventor that his friend had something to ask.

"I now open the floor to the delegate from California for questions."

When the flyer didn't respond, Tom tapped him on the forearm. "That's you, Bud."

"Oh! Right. Well, I've got a couple or maybe three. First, how do you intend to grab onto it. Second, where do we take it? And third, how do we get some of that water down to my old home state?"

Before he answered, Tom made a small adjustment to their flight path. He then turned to face Bud.

"Let's take them in turn, and I might have to put one of them off for a little bit. So, first, we already have a series of mules up here outfitted with their Attractatrons. We use them to get a grip on and fling any space debris to the sides so it doesn't hit our planet. Today, they work autonomously. But, imagine what a team of them could do with a much larger object."

Bud's eyes grew wide. "Like, as in they surround this comet, get a good hold and then slow the thing down to a manageable speed?"

"Yep. And that leads to your number two. Once we have it captured I believe we can successfully drag it to the Moon. Not actually set it down, although that is a possibility, but place it into orbit. There is very little it can do to affect the Moon's path or things on the surface, or on Earth for that matter; it wouldn't have enough gravity of its own. So we get it into an orbit of probably twenty-five to thirty miles or so. I don't have the exact figure because I don't know the exact

mass of the comet. Yet.

“Then, we break off chunks—manageable ones—and take them down to the colony. I’d like to think that we just shove them inside a sort of elevator, but with no rotation and no geostationary point in lunar orbit like we have with the Outpost, that’s going to be a tricky one. Perhaps a tower like the one first written about by a man named Tsiolkovsky. He proposed building a gigantic tower with a new-fangled elevator inside it so people could go up and take a look back at the Earth.”

Bud inquired, “When was that? I don’t recall learning about that in school.”

“And, you wouldn’t have. That was science fiction and even more wild an idea back in the late eighteen-nineties. I believe he even suggested folks could just step out onto an observation platform without any special suits and possibly even reach out to touch the Moon.”

“I see. With you so far, although building something like that sounds like a lot of work. But, what about number three?”

“Well, there is actually a number two-and-a-half, flyboy. That being, how do we get the water off the comet and then decontaminate it?”

Bud gulped. “You mean it’s poisonous?”

“Not exactly, as in full of deadly chemicals—although that we also do not actually know—but I was talking about all the solids in that ice like minerals, rocks, metals, and that sort of thing. Perhaps viruses. But more to the point, radiation. Anything that travels in space and makes a circuit around our Sun picks up solar radiation”

“Yikes! What do we do about it?”

Tom rubbed his chin in thought. “Right now, I’m not completely certain although I think that Harlan and the colony up here might be the answer. They have the facilities to process waste water into one-hundred-percent clean and drinkable H₂O. Plus, even though they are on the dark side of the Moon, their domes still get a dose of radiation, so the air scrubbers and the water purification systems were designed to make everything safe.”

“Wow. How do they do that?”

Tom shrugged. “I don’t know. Harlan doesn’t either. Their

engineer, that Sam Gustavsson fellow, did but he can't give any clues. And, we don't dare ask to tear apart one of their plants to find the answers. Not with this ongoing shortage. Later, I definitely want to know how things work if for no other reason than if there comes a time they need to be repaired."

He paused and took a drink of water from a small bottle. "Now comes number three. This is where generally reliable Tom becomes a disappointment to his best friend and companion by telling him that he doesn't have much of an idea. But, I'm working on that."

* * *

While Harlan and his people on the Moon were searching, Tom was back on Earth preparing for a trip out to the Asteroid Belt. It would be another high-G trip with everybody strapped in most of the time under about 2.75-G acceleration and deceleration. Because of the strain on the body, the only member of the crew over the age of thirty was going to be Hank Sterling who was in better shape than any of them.

Tagging along with the *Challenger* and her crew would be five of Tom's Attractatron mules, all capable of even greater acceleration and speed and not requiring periods of zero-G coasting every four hours.

The trip out was both quick and tiring, so Tom declared a twelve-hour sleep period before they would undertake anything.

He managed to get nine hours in his bunk before his brain woke him with an important question.

What chunk of rock out here do we target?

He got up and quietly headed for the control room where he had to laugh when he found all the other men drinking coffee and having breakfast burritos Chow Winkler had packed for them.

"Rise and shine, mister sleepyhead," Bud greeted him, picking up a covered mug of hot coffee and chocolate milk Tom favored. The mugs, basically adult versions of "sippy cups," were necessary because the ship's artificial gravity emitters only affected the special undergarments the people wore, not food nor drink.

After a quick breakfast Tom sat down at one of the

stations and began a SuperSight sweep of a large area of the Belt in front of them. For over one hour he searched until he happened on a trio of larger chunks all within about a quarter million miles of one another and the ship.

Two reflected the meager sunlight at this range in a dull, rock-like manner while one of them glistened.

Water! Tom nearly shouted in his glee at the discovery. He had secretly hoped to try a capture of an ice-covered chunk.

Zimby Cox and Larry Johanssen, standing close to their young boss, noticed his little bounce of happiness and looked at him questioningly.

Tom explained what had him excited and soon everyone was crowded around the monitor looking at their target.

All thoughts of taking the remaining hour of the rest period flew out the proverbial window as everyone headed for their stations and made the necessary checks of their systems and their assigned mule.

Ten minutes later, Tom maneuvered the ship and formation of mules into a position much closer to the icy chunk.

From just one thousand miles away, Tom's fingers flew over the control board for the mules. All five of them were in a spread formation now, facing toward the target ball of rock and ice. In the distance everyone could see Jupiter and its signature red spot. From their angle they could not see the incoming comet.

Cameras in the nose of each mule sent back incredibly detailed video of what was happening as he sent them slowly inward and around, ever closer to their target.

One by one he halted their progress when they arrived at a point about a mile out.

"Why stop them there?" Hank Sterling asked from the view windows where he had been using the SuperSight camera/video enhancement system to get a good overall view of the action.

"Mostly," Tom replied, "because the asteroid's gravity range of effect is just inside that point. The mules won't get drawn in any time soon so we now have the luxury of time to find the most advantageous attachment points for the Attractatrons."

“Knew it would be something like that,” Hank said back, grinning.

Scans of the surface directly in front of the robotic ships showed the rocky surface and the hundreds of icy patches in between the barren, sparkling and pock-marked surface. It took the inventor an hour to orient each mule so that they not only would maintain a balanced hold on the object, they also had good, nearly flat areas at which to aim.

Tom called out to the four other operators he needed to coordinate with. Now that the mules were aligned, he needed control to be one man per mule. All four stations called out readiness, and he switched management of four of them to the other crew.

“Fine. Then, on my command we move in. I want the mules to go no faster than one hundred feet per minute,” he instructed, “and we all stop when we are at exactly three hundred feet out from each of our assigned locations. Got it?”

“Right!”

“Yep!”

“Got it, skipper!”

“Ditto for me as well!”

On his mark, each mule crept forward slightly slower than a man might walk. It was almost excruciatingly slow, but Tom’s insistence that they not rush into anything was well founded.

Years earlier a space probe—one that was supposed to be mankind’s second ever landing on a comet—had gone horribly wrong when an errant thruster command caused the automobile-sized probe to begin tumbling. By the time control was regained, the probe was only a hundred meters away and going too fast to stop or steer out of harm’s way.

The mother probe got some very clear video of the lander smashing into the comet and disappearing under the icy surface.

At the fifty minute mark, and as they all approached their stopping points, Tom requested that each mule be slowed further.

“Call out when you are in position,” he requested.

Those calls came in the following three minutes.

“Great. On my next mark activate your Attractatrons. Lowest setting at first. We’ll ramp up together once we have capture.”

Everything appeared to go smoothly with each mule reporting successful lock onto one or more metals, mostly nickel and alloys of nickel and copper. But, to Tom’s joy, most were under several dozen feet of dirty ice.

Ten minutes after capture, with Attractatrons at full power, they began the ballet of maneuvers to swing each mule so they could push against some of the larger asteroidal pieces and head back toward the Earth.

They nearly made it when a mini-disaster struck.

The mule being handled by Zimby Cox suddenly streaked backward as the area it had been locked onto broke off from the main body. The chunk swung up and over the mule while its operator fought to regain control.

Nobody was fast enough to avoid what happened next.

As Zimby fought for control of his mule, the other four overpowered their areas in an attempt to stabilize things. That was when the entire half-mile-wide chunk of rock, water and metals broke apart.

“Everyone, back off, now!” Tom shouted.

As they each reported success, only Zimby was still working his controls with the speed of a maniac.

Tom and Bud looked forlornly at the master screen showing Hank’s SuperSight feed.

What had been one asteroid was now at least five large pieces along with several dozen small ones ranging from a few feet to several meters across.

Tom sighed. The only positive thing he could see was that the fractures showed the highly reflective ice under the dirt on the former surface.

“All right. Let me get you each an assigned piece and we’ll put everything back where we found it. With luck and a little maneuvering we might even put the puzzle pieces back near enough so they attract each other and stick.”

It took a total of two additional hours, but the job was finished and the old asteroid looked pretty much like it had before the fiasco, only with many notable cracks and a few gaps that had not been there before.

Silence reigned throughout the *Challenger*. Nobody wished to be the first to say anything. Tom broke the quiet.

“I guess this tells us we need to do better structural soundings of anything we want to use for our next try. I’d like to avoid a repeat performance of today. Let’s go take a break and reset things. We’ll try another target in three hours.”

After using a laser-powered device to stimulate the surface and “sound” out the structure of their next target, the team made three captures, positional moves and replacements of a slightly larger astroid. Tom landed the other four mules on that asteroid for later use and the ship prepared to head back to Earth.

Deciding to take a small chunk of ice with them, Tom sent his mule back to the first chunk and selected a piece nearly forty feet wide. It would, he believed, yield over fifty thousand gallons of water.

With a firm grip on it, the mule was programmed to “heel” to the *Challenger*.

On the way back to the Moon Bud asked Tom, “So, we know we can grab onto something out here, but what do you plan to do once you get hold of a great big old comet? Swing it around by the tail until it gives up?”

Tom groaned. “No, Bud. And I’m not going to try to catch moonbeams in a jar either.” He turned serious. “What I do plan to do is build a space elevator.” He said it so nonchalantly that Bud nearly missed the importance of the announcement.

“Jetz!” he finally exclaimed sitting fully upright. “I know you’ve mentioned it, but... how? Where?”

Tom had considered this for quite some time. “At first I hoped to build one straight up from the mountains east of Bakersfield. Lots of good bedrock to anchor to and an important aquifer to send the water down into the L.A. basin.”

“You don’t sound so sure now, skipper,” Bud noted.

“Yeah. It would be a logistical nightmare. For all the same reasons we have the Outpost parked directly above the equator, we probably will need to anchor the Earth’s first space elevator along it as well.”

Bud’s brow furrowed for a few seconds before his face brightened. “I remember! Either anchor it on the equator or have it whipping around up there like a sine wave.” Tom had

once shown him a computer simulation of what would have happened to the Outpost had they set it up over North America.

“Right. Gold star for you. Anyway, putting it any place other than right where the water is needed would be a waste of time and energy. So, an Earth-attached elevator isn’t what I now plan to build.”

Carefully, Bud asked, “Okay, so where *do* you want to build it?”

Pointing ahead of the ship, Tom replied, “On the Moon.”

“I said it before, but here it comes again. Jetzt!”

The inventor spent the following hour telling his crew how some sort of super strong cable system with a repelatron array holding it straight up, and a platform also utilizing that same invention to move up and down, would be easy to construct, allow for rapid transport of chunks of ice down to the lunar surface where it would need to be processed to remove impurities as well as the radiation before being pumped into expandable bladders and raised back into a position where a large ship, such as either the captured *Genghis Khan*—formerly used by the Masters in their plan to mine an asteroid and then send the remains to smash into the Earth—or his own *Sutter* would be used to get the water back to Earth orbit.

He explained that the former ship might be used like a tugboat to draw hundreds or even thousands of bladders back to Earth orbit, whereas his own ship could carry more than a million gallons inside its golden shell. And, make the trip faster.

“Just trying to stop all those bladders once they reached orbit would be a nightmare now that I think about it,” Tom admitted. “I think we discount using the *Kahn*.”

“How do you get the water down to California?” Bud asked.

Tom shook his head. “Still pondering that part, Bud. Let me know if you come up with any great ideas.”

* * *

The next strange news item to cross Phil Radnor’s desk came early in the morning.

CNN news flash—Follow up to a report from earlier, also posted anonymously to all worldwide social media systems.

“Tom Swift’s friend, confidant, and brother-in-law, Bud Barclay relocated his parents and grandmother from San Francisco, California to a secret housing development outside the gates of Swift Enterprises in Shopton, New York. COINCIDENCE?

E∞

Phil was dismayed but sent it along to Damon Swift. He then set his mind on finding out where these were coming from.

And, why.

Chapter Fourteen: The Evil Within

THE Empress watched Tom's progress on her secret equipment each time she left Harlan behind in their rooms at night.

As she moved forward with her own schemes, she hoped to either stall his efforts, or in her wildest dreams have his own Earth citizens and all its nations condemn him for actions they were being led to believe.

Her plan was complicated; perhaps too complex. At first she wished she might find and enlist the aide of the remaining Elite members, but most were keeping themselves invisible. She had prepared herself to do this on her own. If it were to be done, it must be done right.

She took her time. There was no need to rush—as if she could! Her body was failing her, requiring that she abandon her efforts for a few nights just so it could maintain what strength it possessed. Her awareness of the passage of time was becoming shorter and narrower. But, she had the nasal spray that would, at the right time, give her the long lasting freedom she would need at the end.

She had to make it; she needed to witness the suffering of the people she hated with such a passion.

Over a few weeks she'd managed to recruit a few key people to help her. People with the expertise and loyalty to her that she trusted. Some she trusted because they feared her retaliation. Others had been spared by her interdiction when her brother would have simply killed them for some imagined or real failure. Some were of the former Elite. *All owed her!*

They did the small things—tasks that could not be connected to her master plan of destruction.

Even *she* realized that no man would willingly build something designed to kill him.

* * *

This time Doc took over two weeks to run all the tests he needed done. Some of them were repeated more than once to see if there was any variance in the results. There were only two exceptions to what he hoped to see, and Doc did not like either one.

The first was kind of his fault and he was going to have a hard time explaining it. But, he had to admit it took two to tango.

The second one he could do nothing about. For that one, there wasn't even a viable option.

He called the couple and arranged a meeting. They showed up on time and sat patiently; he was an hour late.

What seemed on the surface to be a routine clean up and stitching job on a colonist, had turned quickly into a, 'Find all the broken shards of the glass' puzzle. A man had, in a fit of anger, slammed his fist onto a table, forgetting that there was a glass in the way.

The final stitch tied off, he assigned a nurse to complete the bandaging and headed for his office. The couple there looked happy, but a little weary. Maggie had continued to add a few pound on her frame in the past weeks. When he came in they were holding hands and talking softly to each other.

Sitting down after shaking both their hands, Doc took a deep breath and put a neutral look on his face.

"Well, without drifting into the realm of half truths and false pleasantries, I have to tell you both what the results of all Maggie's test show. And," he noticed the look of concern on their faces, "I will tell you that some of it is good. Well, at least it is what we should expect. Heart strength, blood pressure, muscle mass. But, there is a little news that you both need to take an active decision in helping me find the proper course of action."

"Am I dying?" Maggie asked straight out.

Doc considered his answer. A flippant, 'In a way we all are' didn't seem to be right in the circumstances.

"Let me tell you that the levels of damage within your body and the resulting issues from your time being injured in Tibet—and that attack you endured—seem to have accelerated over the past eight or nine days. But, to answer your question with the same candor you gave, the answer is yes. Not alarmingly soon, but I now have to tell you both that I believe what I once told Harlan about you having years left is not going to happen."

Through clenched teeth, and feeling that his inaction in getting Doc to Tibet sooner may have been the reason,

Harlan asked, "When?"

Greg Simpson was still a young man and even younger doctor, but he was a good reader of people. He understood Harlan's feelings of guilt.

"I can't give you a guess at this point. And—" he held up a warning finger to stop the next question, "although the initial cause of all this was the attack, Harlan here did as good a job as any hospital in getting your wounds cleaned and fixed, Maggie. The issue isn't the level of care, it seems that your body is simply refusing to heal. It could also have something to do with your albinism. We know so very little about that, not even the root cause."

"So, there is nothing medical science can do to help me?" Maggie asked, her voice now showing the fear she felt.

"I have many requests for assistance out. We might pull a rabbit out after all, but I don't want either of you to feel misled. And," he took another deep breath, "not to try to trivialize any of this, but speaking of rabbits—" He left the rest unspoken as he watched them both.

Harlan's face turned from sadness to joy when the meaning of Doc's words hit him. He spun to the side taking Maggie in his arms.

"What?" she said irritably, eyes flashing for a second with anger. They quickly returned to their normal appearance, and she more softly repeated, "What?"

"Maggie?" Doc addressed her. "I realize that you grew up in a very out of the way place with no formal education. And, your mother was not around to discuss, well, certain aspects of growing up with you, but surely you understand about the birds and the bees?" He looked hopefully at her, wishing that she would connect the dots so he didn't have to have "the talk" with her at this late date.

Her face went from concern to curiosity and then to realization. She looked down at her tummy and back up to Doc.

He nodded.

"How? How could that have happened?" she asked, astonished. "I mean, we've, uhh, that is I thought..."

Maggie was confused. She knew that Doc had issued a prescription to her for pills to block any chance of pregnancy. And, she could recall taking them each and every day. This

should not have happened.

What none of them could know was that the medications the Empress was taking during her nighttime excursions and control of the frail body, had been unknowingly counteracting the effects of Doc's pills.

"I want to tell you that there are measures I can take to—"

"No!" Maggie stated. Harlan was too stunned to speak. "I want to keep Harlan's child. I know you've told me I can't survive the stress of carrying a baby to term, but I must do this. I have to, can't you both see?"

Neither man *could* see, but Doc understood the emotional side of soaring hormone levels associated with the start of a new life. He still had to ask, "Why?"

"It's the low gravity. Everything I've read says our gravity here will reduce the stresses. Even though I knew I probably couldn't get pregnant, I've still been reading up on it."

"Maggie," he began, softly, "if you decide to go through with this I'll have to prescribe complete bed rest for at least the final six months. Even up here with the low gravity, there is too great a danger to your system and the baby if you are allowed to walk around. Can you understand the reasoning?"

She nodded. It wasn't anything she wanted to hear, but she recognized the reasons. "I'm willing to go to bed right now if that will help."

Harlan found his voice. "Can you remove the fetus and grow it outside her body? Like a test tube baby?"

Doc shook his head. "Harlan, the image that misnomer gives people is so much science fiction. There never were and never will be test tubes involved. Pipettes and petri dishes, sure. But for decades the little cluster of cells that one day *might* make a baby are implanted back into the woman. It's only been in the last three years or so that a few extra-uteran gestations have been successfully performed."

Maggie's eyes spoke of her complete loss at what was being said. Doc explained how a team of doctors had created an artificial womb into which they had placed a "test tube" baby. It had not been successful the first eight tries, but had succeeded finally and had been under limited trials on Earth for about two years.

"But, the rate of success is unknown and nothing can be guaranteed," he finished with.

“Well then, if I do nothing else with the remaining years or even months of my life, I am going to do what I have to, to bear my husband’s child.”

Doc cleared his throat. “Ahhh. Well, you see that’s one other thing. You are not having a baby, you are having two. That ultrasound I performed of your body? It shows two distinct cell bundles. And, before you ask, the risks to your health—to your life—are almost the same whether it’s one or two.” *Both very grave*, he thought to himself.

* * *

When the time came, Tom decided the best spot to begin digging into the lunar surface with his Geotron would be the wall of the giant crater about one hundred feet away from the edge of the visible dome. He programmed things so it would spiral downward arriving under the floor of the crater on its first one-hundred-eighty degrees of turn and make another full 360 before heading straight for the edge of the anticipated cavern.

He felt pressure to accelerate operations when Harlan reported that an automated system had flushed out all the purification plants during the previous night before it could be halted. It was now evident that Gustavsson and the Masters believed the buildup of un-processable waste products needed to be removed periodically. Those had been, along with about five percent of the colony’s already taxed water supply.

That got Tom and Bud outside a day earlier than planned.

“Mine is not to bother you with too many questions, skipper,” Bud stated as he helped Tom get the nose of the Geotron up against the solid wall, “but I gotta ask why send it in just about the opposite direction from where you want to go? Why not just tilt it up at a good angle and send it straight down?”

Tom stopped typing his command strings into the small keyboard that hung from a strap around his suit’s collar.

“Will you be wanting the fast and easy answer or the detailed and precise one, young sir?” He could see Bud’s big grin through his tinted faceplate.

“Easy does it, Tom. Always easy for me when possible. So...”

“So, I don’t want a straight shaft from down there to up

here in case we encounter pressure and air or some sort of gas. This way, if there is any debris to come out it will have to bounce along the spiral path giving us plenty of time to get the heck out of the way. I don't want a face full of Geotron if things go wonky."

Bud nodded but still asked, "Are we expecting to hit a pocket of air or gas left over from the very beginning of time for this large hunk of rock?"

"Not really, and I have a sneaking suspicion of what we'll find down there which possibly isn't very ancient at all. But, the possibility of some non-vacuum in that cavern is one I have to take into account."

He returned to his programming and soon nodded his readiness.

"Put your shoulder up behind it and give a bit of a push, please," he instructed Bud and the two Security men who had accompanied them outside. "The lower gravity isn't going to give the treads much grip until about half of the thing is inside that wall."

He energized the Geotron model and added his weight and strength to that of the other three men. Slowly at first, and then with a slight lurch, the Geotron finally began pulling itself into the hole it was forcing apart.

There was one major difference in using it on the Moon as opposed under water on Earth. Everything the repelatron arrays along the sides, bottom and top pushed away remained compacted and pushed away. It did not uncompact and come back together. The result was that the hole—a few inches larger than the model, remained open even once they could feel the vibrations of it passing beneath their feet.

A portable tent with the special monitor equipment was set to one side and the four men crowded inside to see what the cameras were picking up.

For thirty-seven minutes they saw only gray rock and gray sand and gray dust pushing past the forward viewport. But the Geotron had its own small echo locator and it suddenly beeped in their helmets announcing the approach of an open pocket.

Tom checked his control board and smiled seeing they were within a few feet of the cavern.

He slowed the model to a virtual crawl and told his companions they were about to have a strange, new world open up in front of them. He also checked to make certain the video recording was ready to get everything the three cameras would show them.

“Turn on the forward lights, Bud,” Tom requested. There was a flare of brightness on the monitor for a few seconds and then they had breakthrough.

Tom’s finger hit the **STOP** button and the model immediately halted, about two feet of it sticking into the cavern.

“What the—” Fitzgerald began to ask.

“What the... is right!” Tom replied.

On the monitor they could see what seemed to be a near perfect circular cavern with smooth walls that arched up to a ceiling that would probably end up being three hundred feet above the smooth floor they could see below. It was about the same diameter as the dome above.

“That’s not natural, is it, skipper?” Bud asked.

It took Tom a moment to answer. He first checked some of the echo locator’s data. “No, Bud. That is almost definitely not a natural feature. But, I’ve got a good idea what it is!”

* * *

Doc looked at Maggie. “There are a few of things I can do to help you carry to term,” he told her. “Bed rest and the sooner the better comes first. There are drugs that can help stop fetal rejection. It’s still a gamble you have to be willing to take. I still advise against this.” Maggie sat back in her chair and continued to watch Harlan’s face.

Harlan was looking back at her. “My dear, sweet, Maggie. You are everything I need. I never believed a child—well, children—were in our cards. I can’t ask you to take this chance and risk the time we still can have together.”

She leaned over to him, kissing his face in four places. “Harlan, if I’m carrying your babies, and for you to be their father, I need to take the chance. For me, it is worth it. And, besides, I may never have another opportunity.”

She searched his eyes for any sign that he agreed.

Doc cleared his throat. “I hate to tell you but there is one other aspect that, well, may make a difference. You see,

Maggie, your latest head scan shows a tumor in there. Close to the end of that metal fastener.”

“Take it out!” Harlan stated like an order.

Doc shook his head, still looking right at Maggie. “I can’t. It’s deep, spread out and attached. In time it will debilitate you and eventually take your life. I wish it were otherwise, but this time medical science can do nothing.” He felt a tear run down his cheek.

Harlan attempted to rise but his legs gave out from under him and he crumpled to the floor. Maggie just stared open mouthed at Doc.

In a second he had Harlan back in his seat and still mildly in shock; She took his hand and hers and was rubbing the back of it. He couldn’t look at her because he was fighting to hold back tears.

Maggie let her own tears flow, and when Harlan heard her sob he lifted her from her place and held her on his lap. They clung to each other, not knowing what else to do.

Doc rose and brought back a glass of water and two small, blue pills. He held them out. Harlan just gabbled his, but Maggie eyed her questioningly.

Seeing her hesitation, Doc softly told her, "It's safe, even in your condition. It's just to take the edge off your nerves and help your body relax." Slowly she picked up the remaining pill and placed it on her tongue. Without taking the glass, she swallowed.

"Doc, you said it's *technically* possible to incubate the babies outside her body. Right?" Doc nodded although he now hated himself for admitting it earlier. "Then you could use radiation or chemotherapy on the tumor, or whatever radical treatment there is. It wouldn't harm the babies. You can save her, damn it!" He was furious because of the situation and because he felt that his hands were tied.

"Hush, Harlan," Maggie told him and she touched his lips with her fingers. "This is not Doc's fault. It's probably those ugly filaments. Am I right, Doc?"

"Yes, Maggie, you are." Doc held up his hands to forestall any questions. "Your body is doing what it's supposed to do when it detects a foreign substance in the body. It coats it; it isolates it from the rest of the area. It's fighting those filaments the only way it knows how. That resulted in the

tumor.

"Normally carbon-based substances like the filaments wouldn't pose a threat, but in this instance it does. The fastener wasn't sterile when it went in. Maggie's whole immune system has been compromised by her long term starvation. Her immune systems now sees about everything as a treat."

"I know, Doc, that you said you couldn't remove it, but that was on the plane with limited resources at hand. Here you can have everything available known to man. That must make a difference." Harlan was hoping it did.

"Maggie, Harlan, I wish it did, but it doesn't. All the same reasons still apply. Too much brain matter would be lost. The whole quadrant of the brain would be compromised beyond repair. Maggie would die before we got even a quarter of the filaments out."

"How long do I have, Doc?" Maggie's hands were on her abdomen.

"Four, maybe six months, at best."

"Then I could have my babies. They would be premature, that's all."

"That's all!" Doc shot back. "There's no way of making sure that the fetuses will develop right. Even with all the testing, medicines and bed rest that you could get there is no guarantee the babies won't be deformed or mentally challenged because of your pre-existing conditions."

He saw the resolve in her eyes, but had to try one more appeal. "Your body can't handle both the pregnancy and the tumor at the same time," he told her. "It's your life with Harlan, or... or not."

"Then do all you can to keep the babies inside me. As you said, I'm a lost cause."

* * *

The Geotron spent an hour taking detailed laser measurements from which Tom could build a 3D model in his computer. Finally, with everything looked over and checked at least twice, he backed the model out of the hole and up the spiral.

There had been no rush of air or any other gas. The cavern contained as much a vacuum as was on the surface.

And that, with no visible point where a mining operation might have been based, was another mystery to solve.

Inside, Harlan greeted them.

“You’ll never guess what I stumbled on in one of the storage rooms,” he said teasingly.

“Yours might need to wait,” the inventor told him. “I’ve got something you need to know about.”

As Tom began describing the man-made nature of the cavern below them, he noticed that Harlan didn’t appear to be surprised. In fact, he nodded in cheerful agreement at several points.

“You seem to already know this, Harlan. What am I missing here?”

“Missing? Nothing except that we both appear to have found and solved the mystery at the same time, only in different ways,” the Director explained. “These documents are the geological survey of the entire crater before any part of the colony was constructed. Once the reservoir in the mountains didn’t pan out, our old friend Sam Gustavsson did the survey and designs for what these say was to be a super reservoir holding enough fresh water—or even salt water for the growth of large ocean-going fish to be farmed for food—to supply a residential census of about three times what we currently have.”

“In other words, the Emperor and Empress had bigger plans than they were ever able to put into action?”

Ames nodded. “I’m pretty sure that’s right, Tom. But it’s this last page that intrigues me. I always assumed that this dome, with no dome below it, was constructed first and then the rest came. This says at least two of the deepest domes came first at the same time the cavern was excavated, and *then* this one. And, Sam’s plans to complete the reservoir were put on hold by the Emperor once he hit on the idea of smashing an asteroid into Earth.”

“Well, they started building that down pipe to fill it,” Tom stated. He and Harlan stood nodding about that.

Finally, the inventor in Tom came forward. “I’ve got a suggestion for you, Harlan. While I go home and try to figure out how to get a nice, juicy chunk of icy comet back here, why don’t I send up a team to coat the inside of that cavern? It is just the bare rocks down there and probably so porous you’d

lose half of what you pumped in.”

“Hmmm? Tomacoat, skipper?”

“That’s what I’m proposing,” Tom told him.

“You do know we can’t afford to pay for all that, don’t you?”

Now, Tom laughed. “Consider it a house warming gift!”

Two days after Tom headed back to Enterprises, Bud and a crew of five, along with ten large tanks strapped to the rack that could be added on the top of the *Challenger*, returned and men and equipment headed down through the hole created by the Geotron.

To everyone’s relief, the 2-man *Straddlers* fit in the shaft and were put to use flying around the cavern, hauling hoses from the tanks, and used to spray a coat of the incredible tomasite-based liquid plastic over the entire surface. A special ultraviolet light was also taken into the cavern to set the coating. The only place not covered was a thirty-foot circle directly below the drain pipe. Or, as Tom now considered it, the *fill* pipe.

The final task was to seal the hole by adding an air lock that would allow maintenance to take place when and *if* required.

* * *

A video was posted to all social media sites. Obviously a finely detailed animation, anyone giving it only a cursory look might be convinced they were seeing a real event.

On his screen the Security man watched as an asteroid—conveniently labeled as “Typical Wet Asteroid” could be seen splitting apart with large chunks of it plunging into the Earth’s atmosphere.

This time there was no news report, just text over black at the end of the video:

This could happen anywhere over the globe.
Will you let Tom Swift put your loved ones
in the cross-hairs?

E∞

Phil pounded his fist into his desktop. None of these sites

had agreed to provide him information on the origin of these posts. The most aggravating thing was this sort of detail *had* to come from an internal source. A mole!

It was time to bring the big guns in. He picked up his phone and asked his secretary to connect him with Senator Peter Quintana's office.

Chapter Fifteen: Got One!

"Is it true?" asked a wide eyed secretary to another woman who worked in Engineering in the next dome.

"I hope not. If it is I think I'm taking my children back to Earth while I can. It has to be better than going through that hell again. I lost my husband because he was the pilot of the *RockHound* in the asteroid belt when the 'self proclaimed' Emperor died. Why Carl fell for that man back then, I don't know."

"Come on, you can't pull that on me. Maybe to Director Ames and his two cronies, but not me. We know that we came here for personal power and to have a life we could never get on Earth."

The other secretary was shaking her head 'no.' "Fine, lie to yourself. See if I care. But you'll be first in line bowing down to her if it's true."

Magadia had heard enough. None of this would be possible had not a young secretary in her office discovered an encoded file in the colony's computer system, and now she had been secretly watching nine different women.

She backed away from the doorway she was standing at while listening to the conversation. Both were married to the so called Elite. Well, one still was. Since the start of the social media broadcasts, rumors about a return of the Empress were running rampant.

Once far enough way from them so not to be heard, she opened her phone and called Saclolo. He was on a mission of his own. As a one time trusted technician for the Elite, he used his knowledge to spy on the upper echelon and used that information to help his people.

He answered her call on the second ring. She told him of what she overheard.

"Magadia, get down here to the auxiliary power room. I think you need to see what I have found. Tell no one, and don't be seen."

It took her ten minute to arrive; the corridors were always busy during the middle of the day.

Saclolo had several colored maps overlaying one computer screen, and usage charts on another. Magadia

kissed her husband while she had the chance. Filipino customs did not allow for public affection, and being leaders of the mountain people put them in a very precarious position. Both had leadership standards to be kept, not because of the power they received from their position, but because they knew their people were barely on the very edge of remaining free. They came to the Moon as slaves, and being accepted as equals by the remaining Elite was hard.

"Did you find out what you wanted, Magadia?" Saclolo asked.

"In a way. It seems the Elite are just a mystified as we are about those media warnings. Some hope they are from the Empress, but others pray it is not the case. We may have more friends among them than we realized." Magadia was happy about that.

"What about Harlan's wife. Is she actually a sister of the twin devils?"

"The medical computer has no records about the Masters, so I could not compare them. But the facial recognition program indicates that there was 97% chance that his Maggie Ames and the Empress are the same person."

"What did not match up?"

"Bone density, eye color and hair."

"That's all?" he asked in a nervous voice.

"Yes, that is it."

"This is not good, Magadia, not good at all."

"If she is, my husband, does that mean that Harlan has betrayed us? That we will wake up one morning and find ourself slaves again?"

"No, my wife, I trust Harlan."

"With your life?" she asked worriedly.

"With all our lives, Magadia. Now, look at this." He pointed to the computer screens.

"What is it I'm looking at? Those lines mean nothing to me."

"Those lines are power, heat, waste disposal, air lines and vents, and a few other things." Saclolo looked back at the screen and whispered, "Watch." He touched a key and the screen zoomed out.

The five domes of the colony could now be seen along with all their interconnecting pathways. Four of the underground domes were arranged in a semi-circle around the one surface dome that was the control center.

There were two others set farther out, and they were the two newest domes. One was a residential dome never put into use because the last few groups of colonist never made it up. The other was the industrial dome that made most of the items that the colony needed each day. It was what kept them independent from Earth for the most part.

Between the old domes and the new ones sat a dead zone with nothing there.

"Watch." Saclolo zoomed in on the pathways that ran between the two sections. Little black boxes formed on the lines.

"What are those?" She asked.

"Those are connection points."

"To what?"

"Ahhhh. That's just it. To what? There is nothing there that I know of, or can find in the construction records. And until lately there was no indication of anything being drawn off from those points. Now there is."

Magadia's eyes narrowed as she looked at the black boxes. *Not good, indeed*, was all she thought.

* * *

Tom had to reconsider his concept of a space elevator.

The Moon would not be conducive to having a repelatron-powered upper platform just hanging up there for an extended period of time. The continuous power needed would be difficult if not impossible to provide. Solar was out with the Moon being in Earth's shadow some of the time, and the colony located on the dark side. One of Tom's nuclear power pods would only be good for about six months.

Even the thought of the "elevator" only being extended when needed—one of his early considerations—had to go.

What was needed was a solid, permanent structure that required no power to keep raised. The only power necessary once in place would be that used to raise and lower cargo, mostly being ice coming down and water going back up.

Sitting in his underground office and lab one morning he glanced up at the sounds of footsteps coming across the concrete floor of the hangar.

He jumped to his feet to greet his wife and his mother.

“I don’t see the two most important women in my life out together very often,” he told them as he hugged them both, ushered them into the office and offered them seats on the sofa.

“Just so long as you don’t issue us numbers to say which one tops your list,” Anne said to him giving his cheek a pinch on her way to join her daughter-in-law. “At least that way I can sit in a small, dark room, late at night, all alone and pretend that I’m still number one in your heart.” She affected a pretty good pout and snuffle.

“Wow. I now see where Sandy got her lower lip quiver!”

He inquired what they were up to but Bashalli deflected his question with one of her own.

“We will tell you later, but what are you working on that has you with, hmmm, maybe a hundred sheets of paper all over your desk?”

He turned around to look. It was funny, but it hadn’t seemed that messy before his mother and wife arrived. Trying to shuffle things into a couple piles he told them of the space elevator.

“Yes, you have mentioned that several times, but I thought that it was finished. At least, the designs.”

“Well, Bash, I might have liked to think so, but there are way too many things against what I had planned. Fortunately, the woman sitting next to you married a man who is far smarter than I am, and he gave me a verbal list of about twenty things, each and every one of them crushing my plans into tiny pieces this morning.”

“Oh,” she said looking sadly at him. Bashalli Prandit Swift hated it when her Tom’s plans were thwarted in any way.

“Ah, but it isn’t all that bad,” he assured her. “In fact, what I had designed would have had a quarter of the capabilities of the design I hope to finalize in the next two or three days.”

“I hope you do, Tom,” his mother said. “I was up the hill having coffee with Bud’s mother this morning and she tells me a neighbor of theirs phoned yesterday to tell her their

neighborhood is a ghost town. They are the last couple there and are moving out to stay with friends up in British Columbia as of tomorrow.”

“Gee, I hope Bud’s folks’ house is okay. I mean, what with some people taking advantage of other’s misfortune and looting and that sort of thing.”

Anne shook her head. “Evidently not an issue. The neighborhood is surrounded by a fifteen-foot wall and there are armed guards at both entrances. It’s a sad indictment of mankind’s greed but the police and the Governor have had to declare martial law in some communities so those guards are allowed to shoot anyone trying to break into a home. I only hope they have been told to shoot to warn and not—”

Tom wanted to get her mind of that track so he asked, “We haven’t seen anything new on the news, have we, Bash?”

She shook her head.

“Okay, on a brighter note I think we are just two months or so away from being able to get things going, and—” he trailed off seeing the look on his mother’s face.

“I was speaking with your father fifteen minutes ago while Bashi was over talking to Sandy, and he tells me that Governor Adams out there has just issued a sort of ultimatum. As of half an hour ago, you and your father have just five weeks to get them water or they cancel the contract and try to arrange something else.”

“What?”

“That’s all I know. You ought to call your father when he gets back from a meeting with Jake Aturian.”

Still without telling him the reason they were together and visiting Enterprises, Anne and Bashalli left him five minutes later.

He sat at his desk looking over the many drawings and set of notes and computations covering every square inch of the surface.

Tom was still sitting there three hours later when his phone rang.

“Son? It’s dad. Listen, I guess your mother spilled the beans on the California ‘do it or else’ declaration. Is there anything I can do to fill in things for you, or something I can take off your plate so you can concentrate on trying to make

this happen?”

“No. It’s all pretty self-explanatory. They want water. Period! And I have just about everything handled except the way to get the ice from the comet down to the lunar colony and the water back up again. Any words of wisdom?”

“Well, you have devised the way to deliver it to the surface down here, right?”

“Yes. Sort of. Well, I have a little idea but not much.”

“And, that is...” Damon asked in a tone that told Tom he might already be on to an idea but wanted his son to figure everything out for himself.

“Once we get the water up and into the *Sutter* and back to Earth orbit, we—” He stopped and gave him an apologetic grin. “Actually, I haven’t gotten that far. I was going to say we hook the ship up to a pump and shove it all down a giant tube.”

“And, then what...?”

Tom had to think a few seconds before it suddenly became clear.

“I can do the pipe, but the problem becomes where to stick the darned thing. I can’t very well dangle it over the state and just let the deluge come. Can I? *Can I?*”

After going through the logistics they agreed a stationary pipe from space was possible, but was not going to be effective over the entire state.

Damon suggested that as Tom looked into extruding a pipeline for transferring water to the planet, he also explore creating a second, shorter and possibly solid, line but with the difference that it would be anchored to the lunar surface and used as the central shaft for an elevator to both bring down pulverized ice and then to take up the clean water.

The young inventor was late getting home that evening and when he did he had a smile on his face for the first time in over a week.

“Can I assume that something good came from you talking to father Swift?” Bashalli asked after giving him several big kisses.

“You can,” he replied. “Imagine if you will what an elevator looks like if you take it out of a building. Can you picture that?”

She shook his head. “I always imagined they build the building and then hang the elevator inside.”

Taking his wife by the hand he led her to the small office room next to the living room. He pulled the second chair around to his side and they both sat. On his computer screen he created a tall, narrow 3D box image. Inside that he made a more rectangular “car” and added a single pulley at the top.

“Basically they build a very tall square tube running from below the ground floor up to the top of the building. Or, in the case of giant skyscrapers, maybe up half way and then build another box across a hall to go the rest of the way. The important thing is that the elevator starts with the hollow tube, and everything rides up and down inside that.”

She brightened. “I can picture that now. Thank you!”

Tom beamed at his wife.

“So, all I have to do is construct the machine that can build a continuous hollow tube like I first considered two months ago. Only, instead of running from the ocean to the hills it will dangle from space down to within, oh, ten or twelve miles of the ground. Assuming I figure out how to get the water into Earth orbit, my plans are to have it pumped at high pressure down the tube to where it is needed. Then, if I can reconfigure the machine to make a solid core with notches to fit cogs, and build that from the top down and sort of ease it down to the lunar surface—which is *really* an oversimplification—I ought to be able to build the elevator up there to do the ice down, water up trick.”

“I knew you would have it all figured out. I am very proud of you!”

He nodded and accepted her congratulations on his brilliance.

“All I have to do is build it,” he told her hoping it really would be that easy.

* * *

In a few short days Tom would lead a small expedition out just beyond the orbit of the Asteroid Belt with the sole purpose to grab onto the incoming comet.

All possibilities had been—he hoped—accounted for. With a high level of training the past five days, the team that had practiced on asteroid chunks knew that each man could control a pair of Attractatron mules making it possible to

control ten of them.

The inventor computed it would require at least eight to spread the necessary braking forces out. Even then it should take about five days to slow and take complete control of the comet.

They would still allow its inertia and most of its speed to bring it inside of Mars' orbit and closer to the Earth and Moon. The plan was to slowly and gently slow it down the final fifteen million miles and to insert it into a lunar orbit about twenty-two miles above the surface. It would have to remain in orbit for another three weeks or so until Tom's planned elevator could be built. The extruder design was nearly complete.

"When's takeoff, skipper?" Bud asked as they sat sipping coffee that morning in the cafeteria.

"Too soon, Bud. Far too soon for me."

Bud lowered his mug and looked at Tom. He could see the deep concern and stress in his friend's eyes.

"Anything I can do to help? I mean, we both know I'm never going to be able to take the scientific stuff on, but I have been thinking. How about I take the *Challenger* and mules out while you stay back here trying to get the whole elevator and water thing finished?"

Hating to admit he secretly hoped Bud would make such an offer, Tom couldn't disguise his relief. "Oh, Bud. You can't imagine what a huge help that would be. But, that leaves you short one pilot while the five handle the mules. How about that?"

Bud's grin told him this had already been considered.

"Let me guess. You've already talked things over with George Dilling and he has agreed to let a certain blond female employee take a couple weeks off from her responsibilities. Close?"

"Only spot on, skipper. Yeah. Sandy is willing to come along, put up with the G-forces, and take over piloting during the times we mule jockeys have to concentrate on our work. Do you mind?"

Tom laughed. "Mind? Heck, no! Just let me know if you need anything from me before you go or any words of wisdom once you head out. Okay?"

Bud agreed to make Tom the first one he spoke to for anything the expedition needed.

Tom and Bashalli accompanied the *Challenger's* crew out to Fearing Island and watched the liftoff. Five minutes after the ship disappeared through some stratospheric clouds a small formation of mules—the additional ones they would need to capture the comet—lifted off the tarmac, moved forward while turning about ninety degrees to the left, and then headed skyward at an even higher rate of speed than the larger ship had used.

Tom knew they would catch up with the manned ship in about three minutes and would dutifully follow along on the trip out.

As they flew back in the *Sky Queen* Bashalli asked her husband, “Do you ever think I might be of some use on one of your missions, like the way Sandra is with Bud?” And, while it had been asked in a light and breezy manner, Tom knew it was a serious inquiry.

“Well, you now have your pilot’s license courtesy of my sister’s insistence that she teach you. And, here you sit in the copilot’s seat of the *Queen*. For starters, how about you take the yoke while I go do a little work for the other end of this mission?”

Her eyes went wide. She had flown several of the Swift aircraft, even taking control of the *Sky Queen* twice before, but never on her own. If Tom was going back to his office compartment that meant she would have to make all decisions.

“Do... ummm, do you really trust me to not do something terrible?”

Getting up from the pilot’s seat he leaned over to her, kissed her forehead and told her, “Yep! Absolute trust in you. It’s even your choice to leave it in auto-pilot or take active command.”

Once he left the cockpit, Bashalli Swift sat in her seat staring at the button that controlled the auto-pilot settings. She took a deep breath to steady herself, went over everything she knew about the flight systems—including how quickly the auto-pilot could re-establish control should she make an error—and took a firm grip on the joystick controller to her right.

An old Pakistani prayer to give her wisdom passed silently through her lips and she pressed the dreaded button.

Other than the stick giving her a small shake to indicate she had control, nothing happened.

The giant aircraft kept its heading and altitude, and Bashalli Swift was flying it all by herself.

In the back, Tom looked at the small monitor and smiled. He had been keeping an eye on his wife, and now knew she would be just fine.

He brought up sketches of the potential space elevator on the Moon. On the screen it looked for all the world like a giant radio mast.

The central tower, a ten-foot-wide solid rod with a series of “teeth” running around it from bottom to top, rose from a spot about half a mile from the crater containing the colony. He and Harlan had discussed this and agreed the small footprint might have the effect of puncturing the surface over the colony domes, so it needed to be located far enough away to be of no issue.

Coming down from the top would be a series of seven guy wires holding it stationary.

Gone was the large module at the top containing repelatrns to keep it upright.

Also gone was the set of those same repelatrns under the elevator platform. Now, in their place would be a Swift Nuclear Power Pod powering a set of powerful traction motors to drive the gears that fit in the teeth that would move a fifty-foot-wide platform up and down. With the center ten feet in use by the tower that left twenty feet all the way around onto which ice chunks would be loaded.

A new ramp was to be dug in the crater wall allowing a set of carrier trucks—Tom hoped to build automated ones in the future—to be driven down to the colony and loaded into the processing plant of the main dome.

Processed water would now be drained down through the same pipe that was once the culprit in a loss of water and into the water-tight reservoir below.

The “bad stuff” would exit through a new tube and be pumped into a large pit past the elevator tower.

Finally, once enough clean water had been collected, it

would be pumped up and into a series of expandable bladders—shaped in semi-circles to allow for maximum loading of the elevator—and taken up the twenty miles to be loaded into the *Sutter*.

* * *

“That,” Sandy said in a voice that spoke of her weariness and her relief, “was about the worst flying I’ve ever endured. And, you say you and Tom have done that several times?” She was looking over at Bud who was stretching and yawning.

“Yep. And you really ought to have taken Doctor Young up on his offer to give you the knock-out pills.” He yawned again; he had spent most of the trip either fully asleep or drowsing.

He reached over and turned on the artificial gravity, giving everyone about half a G to start with.

Food, clean clothes and bathroom breaks were the order of the day for the next hour before they got back into their seats and performed systems checks.

All the new mules reported their proximity to the ship and complete, positive system checks.

Bud energized the special control board to bring the earlier mules out of a hibernation state, bring everything inside back to operational temperatures, and then fly them up and off the “parking” asteroid where Tom left them.

The comet, now with a noticeable tail rushing behind it, could be seen with the naked eye through the large bank of windows. It would be passing a few hundred thousand miles above the plane of the belt in five hours.

Between now and then the *Challenger’s* crew and their mules had to get turned around and up to a speed matching the incoming comet. Only then could they succeed in making a capture.

“Down time always run so slow out here?” Sandy asked.

Bud snorted. “Savor it, honey, because in half an hour we start, and after that you’ll barely have time to blink!”

As a pilot, Sandy was only slightly behind Bud in capabilities. She performed her final checks and announced readiness. “I’ll show you ‘*Honey*,’ Budworth,” she muttered so quietly he missed it.

She provided the countdown to the start. “Five... four... three... two... and... Go!”

Her fingers flew over the controls and the ship started heading back toward the Earth. Around her the other stations reported their mules were in formation, still showing all positive indicators.

Three hours later Bud called out, “Comet coming within range in three minutes. Get those mules into spread formation. First positions on this side. Go!”

It only took one of the minutes before all reported they were in position.

But a moment later Red Jones reported, “I’ve got a power drop in my second mule. Unit seven. One of the older ones. Holding steady at eighty-three percent but I’m going to have to get closer to maintain lock and have enough power for counter push.”

“Got it,” Bud called over to him. “Keep an eye on that. If you lose it then we have to go to positions one-bravo. Everyone hear that?”

They all acknowledged his command.

The head of the comet was coming ever closer, but slowly because their own speed was just a fraction slower.

The new countdown came followed by a flurry of activity throughout the ship.

Even Sandy had a complex series of maneuvers to accomplish in order that the ship remain out of the way of the repeltrons from the mules as they sought contact points on Mars from which to push.

“How’s that mule, Red?” It had been Sandy asking; she took a look at the concentration on Bud’s face and knew it would not be on his mind.

“Holding, Sandy. For now. Coming back up a tick. Nothing too fast or powerful. I’m compensating.”

“Thanks,” Bud whispered out the side of his mouth.

“Any time, *honey*,” she told him. It had never been a point of discussion but Sandy Swift absolutely hated “endearment terms” such as *honey*, *babe*, *darling*—except when Chow called her that—and especially *sweetheart*.

Thirty minutes later it was evident to all that the comet

had been well and truly grabbed, and the speed was starting to slow. Every so slightly at first, but it was measurable.

Sandy got on the radio and made a call back to Earth.

“Got one!” was her complete message.

As she spoke the words, the crew of the *Challenger* let out a little cheer.

Chapter Sixteen: Master From The Dead

ANOTHER video had been posted to all the same social media sites overnight. It seemed to be taken from within a crowd—often with people in front obscuring the actual subject, Tom Swift.

It showed Tom standing in front of the crowd surrounded by slightly blurry people who looked vaguely like Bud, Sandy, Bashalli and Mr. and Mrs. Swift. The biggest problem was not that they all only looked vaguely like the people they were supposed to be. At no time had that group been in the colony at the same time.

The problem? Lasting just over eleven-and-a-half seconds, a superimposed text stated:

Tom Swift now controls the Lunar Base.
Subjects willingly confirm takeover.
Will he now *control the Earth?*

E∞

Senator Peter Quintana's office had been unable to exert political pressure on these sites. They hid behind the old and vague Constitutional protections of the press.

He had promised Phil and Damon to get a Federal judge involved, but it was taking far too long for anyone's liking.

* * *

Saclolo was with his brother-in-law, Robert Perez, and a few other trusted men. They wore fully armored space suits armed with what were popularly known as "zap guns" that Harlan had passed out to them in case of an attempted coup by the Elite. The group was standing at the hatch leading into one of the mysterious spaces—the black boxes on his computer diagrams.

He had found five of them. One from each new dome and one each from the three nearest consecutive domes. Five hatches and five potential pathways leading to... well, leading to an unknown place.

They were taking no more chances than they had to. Everyone stood to the side—a maneuver Gary Bradley had

instilled in them during earlier training. The hatch opened with ease and a quick glance showed that the space inside could hold up to four people in normal clothing or three with space suits.

Saclolo entered only with Perez; there was no need to risk the others.

In the beams of their rechargeable lights, the space looked like any other automatic power, air and waste substation that the colony contained in hundreds of places.

Perez looked at his brother-in-law and shrugged the best he could in his spacesuit. Nothing in the compact area looked out of the ordinary.

Saclolo located the light switches and activated them. Both he and Robert had to blink a few times, but they soon became accustomed to the new brightness.

Looking around, they saw nothing they would not expect from such an equipment space. Tightly spaced piping and equipment with only enough room for maintenance workers to get between.

“I’m not seeing anything,” Robert whispered over the radio.

“Neither am I,” Saclolo admitted. But, there was something now that needed a closer look.

The light fixture above his head looked odd. Not only did it hang low—just over the top of his helmet—it was not one of the directional LEDs found throughout the colony. In truth it looked more like an old fashioned spotlight that could be manually angled. But, why?

He reached up and gave it a quarter turn to see if it would screw out so he might get a closer look. A click sound was picked up by the suit’s outside microphones and the walls started to move up. All the pipes remained and soon were disappearing above them. Both men grabbed onto the remaining piece of equipment and looked, wide-eyed, at each other. A moment later the truth of their situation became clear. The walls were not moving up, the floor was dropping down, They could see where the wall and floor met had become a slick steel shaft.

The floor sank for several seconds and stopped with barely a quiver. Almost immediately a pair of sliding doors opened at the back of the room. A sixty-foot hallway was out

there, so they walked through it and into a new room with the same type of operational life support systems space that all the domes had. So what was above or around them that needed this separate set of equipment? And why was it not known by anyone?

A shiver ran down Saclolo's spine. He had a very bad feeling about this.

They easily spotted the other four halls leading in from the other domes, but found no way up to what was above them. A mass of wires, pipes and ductwork went up into another duct, far too small for any human to get into.

It looked like a dead end from down here. Access through the substations was only a way to fix this equipment if anything went wrong. Another way had to be found to get to what was above them.

Now that they were certain there was something to look for, they knew they had to find it.

* * *

Phil walked into Damon's office, this time knocking before opening the door. "You called?"

Damon motioned him to come in, getting up and heading to the conference area himself. There, floating above the table was the shoulders and head of Pete Quintana.

"Oh, hello, Senator," Phil greeted the man as he sat.

"And, to you, Phil. I'll get right to the point. The reason I called Damon was to say we finally have a little clue about those damned media pieces that have been coming every few days."

Phil leaned forward in anticipation of what the man from Washington might say.

"It took bringing in a team of young hackers we've used in the past to trace things like this, but their work seems to have paid off. At least three of those things originated on the Moon."

The news stunned the two men at Enterprises.

"Here's the thing. The source may not be anything we've catalogued before. It's an unknown computer address. Highly disguised and pushed down here through about twenty anonymous servers and what they call 'scrubbed,' but with ninety-nine plus percent certainty, that's the point of

origin. We just don't know the person or people actually responsible. However, one of these kids thinks she has an idea to try. I'll keep you advised."

When the conversation ended, Phil turned to Damon and said, "The only relief I feel from that is now we know it isn't an inside job down here. We appear to be mole free."

* * *

The throne room was packed. Somehow news that the Empress was alive and well was running rampant throughout the colony. The worst part was that there had been some sort of communication piped through the colony's PA system into the lower domes stating the Empress was to address the population, in person, in the throne room at midnight. It had most definitely *not* been heard in the upper dome.

The Elite crowded the center front of the room, some of them even wearing their old uniforms. Most of the Elite crowd were technicians, engineers, and scientists. They even left a small cleared space around the more zealot Elite. The Cordillera mountain people squeezed in along the sides and back of the hall, staying out of sight the best they could. Many of them carried weapons of one kind or another hidden in their cloths.

At five seconds before twelve the lights dimmed bringing an immediate hush to the room, and at the stroke of midnight four spotlights blazed down on the stage, revealing a silken, white robed figure. The person's hands were hiding in the elaborate gold-embroidered sleeves. A hood was pulled low over the head, covering most of the face.

A hand with long red fingernails came out of one sleeve and pulled the hood slowly off the head. Red eyes could be seen first, then a bald head.

The silent crowd began to make noise. First, "Hail, Empress Shangri-La," was heard and the Elite in uniforms pushed forward, forming three rows before the stage and bowing to the Empress. Then they did a quick about face, linked arms and stood glaring at the others, as if that would keep them away.

Moans of sadness, anguish and anger could be heard from the rest of the assembled people.

The Empress held both arms out from her sides. Her naked head turned from side to side, slowly looking around

as if trying to locate something... or someone.

"See, my children, I have returned from the dead to lead you all back to the land of salvation. Once more the Elite of the world will lead and the rest shall bow down before us."

She made a sweeping gesture around the entire room, a smile playing on her lips.

"Rise up, throw off the yoke of Earth and its stooges like Harlan Ames and Tom Swift, and take your place in history."

"Never!" shouted a man from the back of the room. He pushed his way forward, a woman at his side. The crowd parted out of their way.

"Seize them!" The Empress shouted to her guards in front of the stage. As the guards tried to move forward through the mass of people, others joined around the man and woman. Fiercely they growled at each other as they closed in.

Weapons were drawn and waved above their heads. Others from the crowd filled in the space behind the guards, enclosing them into a tight circle. The Elite were outnumbered by four to one. Many of the guards now in a panic, torn off their coats and tried to disappear into the crowd. They were caught and held. Some were beaten, one was killed when he pulled out a knife and wildly slashed out. It was taken from his hands and used to end his life.

The Empress stood immobile watching it all. Her hour of triumph was slipping from her fingers. Within minutes one lone man climb onto the stage. He walked slowly toward her. She glared at him as his hand reached for her.

"Saclolo, you dog," she hissed. "Never shall you touch your Master!" Her left hand stretched forward, and a shot rang out. Gray smoke curled from her long, embroidered sleeve.

Saclolo gripped his chest, and staggered forward a few steps, before he slowly dropped to the floor.

"NOOOoooo!" rang out as a woman rushed to his side.

The Empress stepped back and slipped behind the curtains. By the time others reached the back of the stage the Empress had vanished. The wall was solid.

No one had seen her leave. There was no way she could have slipped past the people who closed in on three sides.

Yet, somehow she had.

Harlan had not been in attendance at the Empress' reappearance. Maggie was missing again, and the computer could not locate her. In a near panic he had been running around the upper dome looking into as many rooms as he could before heading down to the dome where their quarters were.

Nothing.

A dozen times he stopped at various terminals trying to find her.

It wasn't until almost exactly midnight that one reported her presence in one of the lower domes in one of the colony's largest meeting places.

Ice shot down his spine as he discovered that the same room, the former "throne" room, now held over a thousand people. With nothing scheduled, he knew this was a horrible sign.

And, although his heart tried to convince him otherwise, his head knew where Maggie was.

And, who she was.

And, what she was trying to do.

His fist pounded into the wall until the skin split, a bone in his little finger snapped, and a fiery spike of pain dropped him to the floor.

"Oh, Maggie. What have you done?" he moaned.

Moments after he received the emergency page, Harlan rushed into the emergency room, stopping short on seeing a bare chested Saclolo sitting up on the edge of the examination bed, a livid purple bruise on his upper body. Magadia was holding his hand and Doc was rotating a 3-D computer image of Saclolo's chest X-ray in the air.

All thoughts of his own hand disappeared.

"Nothing more than a bruise, my friend," the Filipino said with a small grin and a wince.

"Lucky you had that bulletproof gravity underwear on under your shirt." Doc smiled as he looked up into Harlan's worried face.

"I like the feeling of gravity," Saclolo told him. "So, shoot

me!" That earned him a scowl from Magadia. "Oh, that's right. This, by the way, Harlan, is courtesy of the Empress."

"The Empress," Harlan almost shouted out to Saclolo as the man started to painfully put his shirt back on with Magadia's help.

Magadia filled Harlan and Doc in on what had happened at the meeting.

"She was there? In person? Are you sure? And why wasn't I told about this meeting? For crying out loud, I'm the damn Director of this place!"

Harlan was not really mad at either of his subordinates, but angry at himself for not noticing that Maggie wasn't always Maggie. Somehow the Empress was using him, no, she was using Maggie's body. He could not believe that Maggie and the Empress were one in the same person even though he knew the truth.

His wife was the dominate personality by day, and the Empress the usurper by night. He had thought everything was under control, but apparently it was not. *Why?* he wondered.

Saclolo and Magadia both looked up at Harlan's outlash and saw the look on his face. It spoke not of anger but anguish and deep emotional pain.

"Harlan, you can't isolate us from the rest of the world. We must handle the evil in it. We cannot let what happened to us back in the Philippines happen to us again." Saclolo stopped and took a deep breath and clutch his hurting chest.

Magadia took up where he stopped.

"We had only rumors to go on, and when we learned of the late night gathering taking place, we reacted to it. We knew that you were with Maggie, and right now she is the one who needs you most. We..." and Magadia looked at Saclolo, "we did not really think the Empress was alive. We thought that someone must be impersonating her and this was the time to put an end to it."

"Go back to your wife, Harlan," Saclolo spoke once more. "Protect her from her deranged sister. Until we find the Empress and the Elite that must be hiding her, she will not be safe. Maggie is too good a target not to try to get."

Looking down at the end of Harlan's right arm, Doc said, "You're dripping blood on my nice, clean floor. Let me take a

look at that.”

Harlan just looked at Doc with total dismay on his face. Doc could only shake his head and shrugged his shoulders. Harlan now knew that he had to stand up and tell, at least these two people, the truth.

Taking a deep breath, and as Doc began to clean and repair his hand, he let it out slowly and began to tell them his story of deceit and of half told lies.

* * *

Three days later, and with no sign of either the Empress or of Maggie, Harlan addressed the entire colony.

He told them nothing about Maggie or the Empress. What he did tell them was that every man and woman's assistance was going to be required soon to make the space elevator and the water cleaning and reclamation work a reality.

“You have been on water rations far too long. As you must all be aware, our Moon cannot supply us with more water. The Masters planned on hijacking water just as they kidnapped the vast majority of you by taking what is not theirs from the Earth. They have always been willing to kill to get what they want.

“That plan would have been impossible to implement. In their own haste or stupidity they destroyed the only means they had of launching great weights into space. However, with the aid of Tom Swift and my former employer, Swift Enterprises, we have the chance to get the needed water legally and safely. In another two weeks a water-rich comet will be gently put into orbit. We will have our own little moon, but one that will save this colony and allow us to be as free as possible from the planet or your and my births.”

Around the colony the mention of Tom's name raised mixed feelings. Many realized the recent notifications regarding the young inventor had to be just more lies from the Masters, but a few held onto the belief that they might soon trade one “master” for another if they helped in the scheme.

Some swore that his ERBs had been the only thing keeping the colony alive.

More than a few fights broke out over the next twenty-four hours until Harlan made a second address reminding everyone that there was no value to be gained fighting

themselves.

“We have the Empress, or the interloper posing as her, to locate and bring to justice.”

That last statement nearly broke his heart. He knew it condemned Maggie to suffer for the sins of the Empress. He still found it difficult to separate the two.

* * *

The comet had settled into its twenty-two mile high orbit, making a complete circuit of its new home every hour and five minutes. Tom’s plan was to station a mining team right on the comet to break off the chunks and then have the mules grab them as everything passed overhead of the coming space elevator.

Everything he and his father computed showed that a full load of ice could be mined in about thirty minutes allowing a rest period for those riding the comet around and around, and time enough for the mules to deliver their cargo and get back into position to take on the next batch.

“I’m still not sure about how much we’ll lose to the cleaning process,” he told Bud, “but if it is less than twenty percent we ought to be able to fill that two-million gallon reservoir in about a day.”

“Have you figured out how to get everything up and down?”

Tom shook his head. “I have several ideas including my original one of just having the mules set the ice down on the surface, but Harlan doesn’t have the equipment or other means to move it quickly enough. I’m having Jake Aturian and his people build a conveyor system to get things down to the colony rather than try to build a truck fleet, with a pipe to carry the finished water back out. After that, I’m toying with refillable bladders or another method that should work a lot better.”

When Bud asked what that might be, Tom shook his head. “I’ve already got my own hopes up too high, so I’d rather get everything figured out before making any announcement. Even to you, Bud. Sorry.”

“You don’t need to apologize to me, skipper. Just if I’m the only one you’re not telling about something. If I’m part of the larger, in-the-dark herd, I’ve got no complaints!”

Chapter Seventeen: The Boxy, Pipey, Squirty Thing

“HOW did you say you’ve decided to get all that water back down here, Son?” Damon asked Tom as they sipped coffee in the shared office. Tom had just finished describing the process of getting the water down and back up from the Moon’s surface. Damon had been so busy with his own meetings that his mindshare had been slight when Tom had described his “dangling pipe” theory two weeks earlier.

“Funny. That’s what Bud was asking a couple days ago. I admit it is a pretty audacious plan, Dad,” he said with a slightly sly grin. “It involves doing something I once proposed and you sort of shot holes into it, but on a whole other plane of reality. Plus, my becoming what Bud says will be a new rain god.”

“And, that statement gets you my undivided attention!” Damon told him with a smile and a nod. “Tell me more, please.”

“Okay. If you will recall one of my first notions was to build a huge, double-chambered pile line from the ocean up to one of the largest reservoirs in California, and to use a series of filtering membranes to remove the salt.”

Damon nodded. “Yes, I recall that. And, it might have had some good application if this only involved something like no rain in Northern California where you might resupply their huge Lake Shasta. Which,” he said after a moment of thought, “might still be an interesting notion to pursue.”

“Right. But as we’ve already discussed, I going to build a pipeline, only this time up in orbit!”

It took the older inventor a full minute to form a question. “To what location?”

Tom pointed to large old-fashioned monitor on the office wall. “Watch.” He picked up the remote controller for the screen, tapped out a series of commands and they were soon viewing a computer animation.

“That rather large box coming up from the ground on its own repelatrions is the pipe-extruder that is nearly ready to build, courtesy of Jake Aturian’s people,” Tom explained. “We can supply it with a foaming tomasite mix carrying

things up in our cargo rockets. Since they will only have to gain about one hundred miles altitude, they can carry a full load of liquid. And, since they are all repelatron-powered these days I figure they can each make five trips every twenty-four hours.”

As they watched he described how the extruding machine would create the pipe at a rate of nearly two-hundred feet per minute. “That way we make each mile in nearly four point four hours. I plan to make the tube about eighty miles long.”

“And that will take, if my mind math is still accurate, about fourteen and, oh, maybe a half or two-thirds days. Right?”

Tom smiled. “The mind math continues to amaze me, Dad. And, yes. Fourteen point six seven days. It will cost us about five million dollars for the foam materials and another three to build the extruder, but I’ve had Jackson Rimmer get to the California State Treasurer, and she is now willing to guarantee to underwrite up to twenty-five million to put an end to this emergency! Not just the fifteen they offered before.”

“So, let’s say that we already have the extruder. Walk me through the process of getting it up there, making it produce foam in the absence of air, and then how the water gets to where it is needed.”

Tom switched to another animation. It started with the appearance of his giant golden ship, the *Sutter*, coming into the picture. It moved into position above the lunar surface where it “docked” with the Moon’s space elevator.

“Once it docks it takes on a load of the hydrogen they are extracting from the cometary water. That will come from them separating some of the water into oxygen and hydrogen so they can refresh their atmosphere. They can only use so much hydrogen themselves, and it is perfect for reacting with the foam in its liquid state.”

“How does the gas get up there?” Damon inquired.

“Oh, yeah. I forgot to tell you I’m now planning to abandon the solid core elevator shaft and just extrude another pipe on the Moon. I’m still planning to etch in teeth so a cog system can drive the elevator smoothly up and down.”

The *Sutter* moved away and flew—in just fifteen seconds—to a stationary point above the Earth. From there a short line

moved out and connected to the extruder. Right after that the pipe began to come out, heading downward as it was extruded.

When enough had been built and dropped through the atmosphere, the extruder was moved away—minus its four repelatrongs that now supported the pipe—and the *Challenger* took its place.

“We’ll use the additional power of her repelatrongs to help maintain position and to control that pipe,” Tom offered.

“I’m with you so far, even if I foresee a few control issues,” Damon replied, but said nothing more.

The animation showed the golden ship going back to the Moon where it now took on a load of the reclaimed water. That was pumped up through the central shaft of the elevator. A countdown clock showed that Tom anticipated each load would require about three hours to pump up.

The return trip to the upper pipe end was made as quickly as the first and the docking repeated.

“Now, the flexible bladder inside her hull will start to squeeze the water into that down tube,” Tom explained.

The view dove through the upper atmosphere and down and slightly away from the pipe end. A strong flow of water began to come out and was quickly spreading out over an area Tom described as being between a mile and maybe up to five miles wide.

“So,” Damon said as the animation came to an end, “I now see how you plan to deliver the water. Not directly into reservoirs but to replace what has been lost all over. Can I assume that you plan to move the *Challenger* and that pipe around to service multiple areas?”

Tom’s broad smile gave him the answer.

“Just how much water and over what time do you expect to give them?”

“The Sutter can transport a million gallons per trip and make three trips per day. The equipment on the Moon can clean up and prep nearly that amount in that same time. Their reservoir can hold nearly two million gallons so that gets filled during the first day of production. Well,” he blushed a little, “actually they’ve started to fill the reservoir just doing test runs this past week.”

“I can’t blame them for taking care of number one,” Damon responded.

“Right, and toward that I also asked Jackson Rimmer to see if California would be willing to pay for the processing and delivery of that water. They will make a direct payment to any account in any bank Harlan and his people deem appropriate in the amount of one million per week while we run a continuous operation.”

Damon nodded thoughtfully. “So, we get all our expenses paid, Harlan and the Shangri-La-ians get several million dollars to use for trade and to purchase what they can’t grow or make, and California gets its backside pulled out of danger of drying up and dying off. I like it. And,” he stood up and turned to face Tom, “assuming it all works as you plan, it should be a win, win, win situation.” He arched one eyebrow as he headed to his desk.

Tom called after him, “But, you don’t think things will go that smoothly?”

Damon sat down and drummed his right fingers on the desk. “Does anything?”

* * *

The first payment came in from the western state two days later. Tom had used that time to finish the plans for the extruder. It was going to be too large to be lifted by placing in on the installable rack atop the *Challenger*, so he had to upsize the automated repelatron pods on each of the corners. A simple gyroscope and gimbal system would keep the cube upright and heading for the proper location and the atomic power pod inside would also provide the power to run the extruder once in space.

The repelatrons would adjust to help stabilize everything as the pipe started to encounter turbulence inside the upper atmosphere.

The more he ran computerized tests and simulations, the more Tom convinced himself that a second set of at least three repelatrons positioned around a moveable ring at the bottom end of the pipe were going to be necessary. These, he thought, would be aimed downward at very wide angles where they could push against the ground with just enough directed power to maintain the position and stability of the pipe.

Of course, this meant another computer, more programming, more simulations and more things to build, but it would barely impact the schedule.

Things had gone from bad to very bad in California. A huge forest fire on the peninsula where all cities from San Francisco down to San Jose sat had required that massive amounts of salt water be sucked up and dropped by tankers in order to protect the population. But, this also meant that the various catch areas where fresh water pooled to feed the animal life had to be flushed out with some of the vital fresh water from the remaining reservoir supplies.

This had been a very sore point between politicians and those who were sworn to be the public voice of defenseless animals and fish. One would accuse the other of catering to wildlife at the expense of “real human beings,” where the other would accuse them of “signing death warrants on animals that would eventually seal man’s fate!”

At least one notable fist fight had broken out live on television that ended with three broken noses, a severed index finger that had been inadvisably shaken in the face, and close to the mouth, of a rather angry and plump woman from the Wildlife Federation of America, plus numerous abrasions and one badly damaged \$200,000 camera that had been abandoned by its operator when things moved too close.

Bud and Sandy were having dinner up at the house on the hill with his family when that broadcast had been shown.

“Idiots!” his father declared.

“Oh, those poor, silly people,” his mother added.

“Poop on them!” his grandmother stated causing Sandy to nearly choke on the spoonful of soup she had just put in her mouth. It sprayed out and across the table.

“Sorry,” she meekly said while she tried to mop up the small mess.

“Mother!” Mrs. Barclay admonished the older woman. “Such language.”

“Then, poop on you as well, dear,” she said now more gently. “Each and every one of those people is a fool and doesn’t deserve those glasses of water that were sitting on the table in front of them. Somebody ought to charge them a thousand bucks for spilling them!”

Nobody could argue with her. Her language might be a tiny bit off color, but she was right.

They turned off the TV and finished their meal over more polite conversation.

Bud's grandmother ended that when she inquired, "So, when are you two going to make a baby and turn me into a great grandmother?"

"Gran! For crying out loud. Sandy and I have only been married a few months. Give us time."

"Poo! Why, I was pregnant with your mother the very night of my honeymoon." She now blushed a little as she added, "Or, even the night before."

Sandy barely managed to avoid spraying the table with the mouthful of water she had just taken.

At the same time, Tom and Bashalli were dining with his folks. They had watched the display with the sound turned down and there had been no indoor rain showers.

"Son, tell your mother and darling wife about your plans for getting water to those fools," Damon urged.

Tom gave them an abbreviated version of the plans trying to keep things as unscientific as he could for Bashalli's sake. He knew his mother, with a Doctorate in Molecular Biology, would be able to follow almost anything even if she sometimes pretended to be ignorant in order to allow her "men" to give voice to their own inner questions.

The two women had already heard one of Tom's earlier versions of the plans that day in the *Sky Queen's* hangar.

In the end, Bashalli sat in thought, When Tom asked her if there was anything he needed to explain, she shook her head and looked up at him.

"No. I do not believe so. If I understand, you intend to build some sort of boxy, pipey, squirty thing up there, lower one end above California, and give them a good shower. Is that it?"

Tom smiled, leaned over and gave her a kiss. "Absolutely, Bash. You have it in one, albeit using words I never would have thought to use."

"But," his mother, Anne now asked, "how will the elevator up on the Moon work, and then why not build one down to the exact place in California the water is most needed?"

“That, Momsie, is easy. First, up on the Moon we have a wonderful situation where the Moon itself doesn’t rotate like this planet does. That’s why we always see the same face. Oh, it rocks back and forth a little, but not much. So, and this is also why we can’t do the same thing in California, we don’t need to put the bottom anchor point on the equator.”

Anne now looked at her husband. He gave his son a questioning look, and Tom nodded.

“Well, Anne, you see it’s only along the equator that an anchor point allows anything to stick straight up into space. Anywhere else and you have to deal with things ending up swinging all around up there. Now, this isn’t a really good example, but think about a beach ball. If you turn it sideways so the ‘equator’ is at the top and place a golf ball on it, you can balance it there. But, try to put that same golf ball a few inches down from absolute top and it rolls off.”

This confused Bashalli and Anne scowled but finally brightened. “Oh. Okay. So, no movement on the Moon means you don’t have to be at the equator, but down here with our spin, you do?”

Tom answered, “Right. And, I’ll explain it a little more to you, Bash, later.”

“What about not bringing the end down to the surface?” Bashalli asked.

“Well, any lower than about forty-thousand feet and it becomes a hazard to aircraft, is more and more apt to be affected by winds, and becomes a logistical nightmare of getting it up and out of the way of things. I want to remain above fifty-thousand. Besides, my simulations show that doing it this way might take almost twice as long to finish, but it benefits *all* living things in the state. Plants, animals, fish and people.”

Both Tom and Damon discussed how the water would naturally flow down streams and rivers to where it was normally taken for human use. It all made perfect sense.

Soon the discussion turned to what to do with the pipe once the emergency was over.

With a shake of his head, Damon spoke for Tom. “The trouble is, it will never be over. Not as long as far too many people live in any area nearly devoid of water resources on its own. And, it would be detrimental to have huge numbers of

people desert one state only to, well, invade another placing the same burden on *that* state's resources. No, I believe that once put into use, Tom is destined to have to continue to deliver water every so often if this is to not happen again."

Bashalli spoke so softly that she almost could not be heard. "Perhaps it is against all the freedoms of this nation, but just perhaps it is time to tell people to stop having babies. Stop moving to areas where there are no resources. Stop killing this planet."

Nobody at the table could say anything against that, so they sat in silence for nearly five minutes. "Time, I believe, for dessert!" Anne declared finally, and she and Bashalli got up, taking the dinner dishes with them.

Damon and Tom sat in silence until they both heard Bashalli sobbing in the kitchen.

"Go to her, Son. She needs to have *your* arms around her, not her mother-in-law's."

Tom rose and walked through the closed door to comfort his wife.

* * *

Bashalli's boxy, pipey, squirty thing came together in under a week. It was a fairly simple mechanism and would rely on the pumping capabilities of the *Sutter* to deliver the hydrogen gas to one side while being constantly supplied with the foaming liquid by supply rockets on the other.

All the box had to do was mix them in the proper ratio, force the quickly expanding and setting foam through the shaping die and let gravity draw things toward the planet below.

Tom's control ring to be added to the end of the pipe took a day longer but was ready in good time and hitched a ride into orbit on top of the extruder box along with a large yet lightweight tank of hydrogen to use in making the first five hundred feet of pipe.

They rendezvoused above the West Coast with the first of the supply rockets. An hour later the first few dozen feet of pipe came out.

Tom, Bud, Zimby Cox and two other Enterprises men in spacesuits maneuvered the repelatron ring into position quickly. They knew they had just fifteen minutes before the foam inside the cube would need to come out or be set solidly

and require the extruder be dismantled to remove it. That was something they couldn't afford, so Tom also brought along a motorized device that could quickly tighten a cutting wire and sever the pipe in case of a delay.

But, things went exactly as planned and within ten minutes the pipe was coming out again. With only enough material for about five-hundred feet it was planned to go ahead and exhaust that, cleanly cut the end of the pipe and await the time when everything would be ready to continue.

A sealable connecting collar would be brought up on the rack of the *Challenger* to connect the short pipe with the continuous run of the remaining miles and miles of it.

But, going any farther was not practical until the space elevator on the Moon was completed. That meant repositioning the extruder.

Tom was glad he'd decided to move away from a solid core for the lunar unit. The lift cabling—no matter how strong he could make it—was always going to be a problem.

"What do you think about the lunar elevator?" he asked Bud as they sat in the *Challenger's* control room while the extruder was being reconfigured to be used on the Moon. He had not mentioned the change to a hollow pipe approach.

The dark haired flyer scratched his nose as he thought. Where Tom's chin seemed to come into play when deep through was involved, Bud's nose provided him the same stimulus.

"Well, and I don't want you to think I tried to second guess the genius that is Tom Swift," he replied finally with a grin, "but your sister, my darling and somewhat pushy wife, and I were discussing some of this the other evening. I was explaining about that little part of the project," he said pointing out the wall of view windows at the nearby extruder and the dangling pipe, "and she asked why you weren't just making a pipe all the way from the Moon."

"You and I both know that's not possible," Tom began before Bud nodded and continued.

"Right, but then I had a thought. Possibly not a good one, but it proves my brain stiff functions at some level."

"Spill it, if you would, please," Tom insisted.

"Okay. But promise you won't just laugh and go telling people what a dunce I am proving to be?"

Tom crossed his right index finger over his heart. “I swear.”

“Fine. Well, what came to mind was why not raise another pipe up from the lunar surface into space and use that to bring the ice chunks down and shove the fresh water back up? I mean, you could still use the cables you’ve built, just now as the guy wires to stabilize the tube.” He looked expectantly, and a little timidly, at his friend.

Tom began to laugh. “Out of the mouths of babes,” he stated.

“Why, Tom Swift. Are you calling me a ‘babe’?” Bud asked fanning his face with a hand spread out like a paper fan.

They both laughed at the image, but Tom soon sobered.

“No, really, Bud. It’s that you’ve just hit on the solution I’m going to use. We’ll need to reconfigure the platform so that it rides on the outside of the pipe, but all the fresh water will, as you suggested, be pumped up inside the pipe.”

In his mind Tom was seeing just how the platform would operate.

As he’d planned with the solid core shaft, the platform would still use the cog and teeth approach to bring down the ice. The only real difference was inside the hollow pipe that would need to have at least one additional pump installed at about the half-way point.

He pulled out his tablet computer and, while Bud busied himself with preparing lunch for the entire crew—the rest of which had just entered the hangar below—Tom performed calculation after calculation to find what weight capacity would be possible. Ten minutes later, and with a smile on his face, he joined the rest of the crew.

As they ate he told everyone about Bud’s idea matching his.

“Ah, skipper, you’re going to have to add Sandy to that or she’ll skin me alive. She might not have had the idea, but she’ll scream bloody murder over this because she was the one who asked about a Moon pipe,” the flyer complained.

“Fine. You can go home in good conscience and tell your wife that it was her mention... no, wait, it was your proudly telling me of her mention—yeah, that ought to placate her—her mention of the pipe that got the two of us discussing it. Then, you can tell her that it was you who put two and two

together.”

“And, as usual, came up with five and you stepped in and showed me where I made the error,” Bud said.

Everyone laughed, not because it was true, but because they all knew that Bud was a lot smarter than he publicly gave himself credit for.

“Like I said, Bud. Out of the mouths of babes.”

“There you go calling me a *babe* again!” He snickered to himself for well over a minute.

* * *

Something in her belly wasn't right. It hurt and made her violently ill at times. With no more access to the medical computers, she could not see Doc's diagnosis and could only treat the symptoms with antacids and an anti-nausea drug. But, she now believed she had more to worry about.

As careful as she had been, the Empress made a mistake with her final media posting. Instead of availing herself of the complex network of false and misleading servers, in a hurry to try to force Tom Swift into a making a wrong move she had used an older fake account to post a single still image of Tom kneeling down with what—to anyone with a high-resolution monitor—appeared to be a hastily added image of a young woman seemingly being held down by the inventor, fear evident on her face.

She hoped people would be viewing this on small cell phone screens. Anyone else would see it was a phony.

She even went too far with the caption appearing under the picture:

Tom Swift is willing to kill to get what
he wants from you! Stop him!

E∞

Her unmasking and downfall was set in motion when records showed the same fake account had been identified and traced back to the Moon a year earlier, and to a known computer address from the time when she and her brother ruled the colony.

A forced reverse command string activated the monitor's camera and they had recorded video of Maggie, red eyes

blazing, sitting at the keyboard, typing the message.

The FBI and InterPol contacted Damon Swift with the information.

“I guess it’s time to let Tom know what has been going on,” he said to Phil.

“Allow me,” the Security man offered.

Damon nodded his agreement, but requested, “Please let Gary Bradley know as well. I want him to post a man with or near Tom at all times. This is not a good situation at all!”

Phil hesitated.

“Yes?” Damon inquired.

“What about telling Harlan?”

Mr. Swift considered this a moment. “While I love Harlan like a younger brother, or even a son, he’s too close. We can’t be totally assured he won’t let the cat out of the bag. He can’t be told that the woman he married is the Empress!”

Chapter Eighteen: Anchors Away!

WITH little warning, she stopped. The man ahead of her was nearly thrown off balance by trying to stop suddenly but recovered and turned to face her. "Yes, Empress?"

"Doctor Otto, where are you taking me?" the Empress demanded. She did not like the feeling of not being in control of her situation. The tunnels they were traveling through were dark, smelly and cold. Her thin garment let more body heat out than it held in and she was becoming stiff. And irritated.

They had been moving between two stacks of pipes that were laid three high. Wet and slimy in the few places she unwittingly touched, they gurgled and sloshed from time to time.

"Saving you, my Empress," he stated. They continued onward. "You should be glad that I know of your secret quarters." He looked at his wristwatch and nodded to himself. "As of this minute it is under attack. Saclolo and the Swift man, Bradley, are taking it down. They may have as many as fifty others with them."

"Let them," laughed the Empress. "Many won't be coming back. I have that place heavily booby trapped."

The doctor stopped walking again and tuned to look directly at the Empress' face, something he had never dared before. But now, she was only a lady on the run, taking direction from him. He felt powerful and alive for the first time in his life.

Emperor Ocampo flashed in his mind.

"They won't work," he told her with a smile, a smile that was quickly slapped from his face. It wasn't hard, but it shocked him.

She grabbed him by the lapels of his white lab coat and threw him into the pipes. He lay flat against them as the Empress stepped up to him and touched the blood seeping from his split lip. She admired her fingertip for a moment before she made an X mark above his heart with it.

The doctor shuddered; he knew what that meant. He was now a target, disposable whenever she thought he was no longer necessary.

Perhaps he *should* have disappeared back to Earth when he had the opportunity rather than fake his getting aboard the rocket. The man who took his place would be long dead; the slow poison given to him would have taken effect a day after reaching the planet.

But, that wasn't his problem now. He was a doomed man unless he could prove his worth to her once more.

"They are flooding the whole place with liquid helium from the power rooms under your quarters. Their intent is to force open several of your hidden tunnels and go in once it is drained away. They don't even care if you are there. Finding you frozen would save them a lot of grief."

What he could not tell her was the orders had come from her—no, it was from *Maggie's*—husband, Harlan Ames. In a near trancelike state, he'd signed the order for the attack. If possible or practical she was to be taken alive, but only if it might be accomplished without bloodshed on the part of the colonists and Enterprises' Security team.

"The insolence of them! They will pay. Oh yes, believe me, Doctor Ocampo, they will pay. Once more I demand you tell me where are you taking me?"

"My Empress must hide some place they will never look," and before she could raise her hand to hit him again, he spat out, "The morgue! I have a secret room in the back wall of the morgue freezer. Who in their right mind would look for the living there?"

"Who indeed," she laughed, her attitude swinging back from the brink of anger, her glaring red eyes softening again. "Take me there. Keep me informed of what is going on with the colony, and get VanBrown to come see me." The Empress pushed the doctor to hurry him along.

You think you have the upper hand now, Harlan, she thought. But you don't. Wait and see!"

* * *

In spite of everything going on, Harlan was quite pleased when Tom made a trip to the lunar colony to inspect the elevator's site, and to discuss the new pipe-based concept.

The visit would take his mind off what was going on below them in the very bowels of the colony.

"That's great, Tom. And, since the guy cables were made

long enough to set the bottoms about a half mile out from the base, and all the way to the very top so they wouldn't interfere with the movement of the platform, I foresee this as being just what we need!"

"Glad to hear that," the inventor told him.

"Of course, we have to have some way to protect the anchors in case the Elite get it into their heads to try to ruin things again."

The inventor nodded; it was on his to-do list.

"Tom called me a 'babe,' " Bud told their host flashing a big grin.

With a quick glance at Tom, who rolled his eyes, Harlan replied, "And, I'm sure that is exactly what you *think* he said, Bud. Personally, you're not quite my cup of tea, but I've heard that weak-minded young girls seem to find you fascinating!"

"Ouch!" Bud replied miming an arrow striking him in the chest.

"As to the cables, we made them about twenty-two miles long and only need about twenty-one," Tom said to their host. "I did that so we would not be in a position of attempting to splice if we wanted to go a little higher. So, unless my head is so full of visions of our lovely Bud, I believe that anchoring the guys a half mile out instead of the original quarter mile will be no problem. We might even make it several hundred yards farther than that."

They discussed how many cables would be used and both agreed that at least five would be needed for greatest stability. But, Tom said seven were being braided already.

"Bring them all," Harlan said. "The more the merrier, or at least more stable!"

"Good. Then I'll have the same number of self-drilling anchors delivered up here in a couple of days," Tom promised before he and Bud departed.

Tom's latest self-setting anchors were a vast improvement over the first ones he constructed for his adventure in the caves of nuclear fire. Those were barely eight feet long and sometimes needed a pilot hole be drilled to get them started.

And then there was the problem of how the old ones worked. By drilling, even with counter-rotating blades, the

hole had to be five inches wider than the anchor to allow the dirt and pulverized rock to move back up the sides and out the hole. They were best at horizontal strain, not vertical.

The ones to be installed on the Moon used an advanced type of electro-plasma arc to heat the rock to the point where it would liquefy and flow up through a central tube and out the back end.

A single—salvageable—Swift Solar Battery, kept protected to the side of the hole, was sufficient to dig the much longer anchor in and rotate a special screw drive to shove out spiked plates along the outer case into the surrounding rock so tightly that only something as mighty as his *Sky Queen's* lifters had been able to pull one free.

Still, a new type of hard-set foam would be forced all around the anchor shaft and into the tiniest little gap or cranny where it would double in size and set more solidly than high-stress concrete.

In other words, if you wanted one out, you pretty much had to destroy it.

Along with the seven anchors Tom next brought up, the shipment included a few other things to make the jobs of transporting the ice chunks from the elevator to the processing facility.

Once ice chunks reached the surface they would be placed on the conveyor belt that took them through a wide ring. Inside the ring were a series of extendable hammering spikes that broke the large pieces into ones small enough to travel down to the colony and through a continuous passage down to the processing facility.

It had been necessary to install airlocks on the front and rear doors of the room as Tom's conveyor system needed to be continuous, and stopping to put things into and take out of a large airlock would just not work. The processing room was now open and in the same vacuum as the surface.

Being mostly automatic this was not too much of a problem.

The test chunk of ice that had been set down inside the abandoned mountain reservoir—to keep it in the coldest possible location—weeks earlier had already been retrieved and processed.

As a result, the colony now had an extra fifty-thousand

gallons of potable water, slightly more than had leaked.

This led to an uneasy truce between those who distrusted Tom—and even Harlan—and those who believed them to be their only hope for continued prosperity.

“Uh, skipper,” Harlan said, as he stopped outside the door to his offices, “I think we need to talk. I have to tell you a few things that you will most likely hate me for, but I beg of you to not take it out on these good people up here.”

Tom and Bud stared at him. The three of them stood in silence a full minute before Tom reached past their host, turned the knob and pushed the door open.

“I guess you’d best tell us all,” he said, “and then I think I need to tell you something you will definitely not want to hear.”

Once they were sitting down, Harlan blurted out, “My wife is the *Empress!*”

Tom sat upright, as if frozen to the spot. Harlan looked at his former young boss and began to shake with the anticipation of the shouted rebuke he knew was coming.

Instead, Tom reached out a hand and touched his leg. “We know,” he stated.

He explained about how a team of young hackers in the employ of Senator Quintana’s office had broken down the lines of protection and blocks to locate both the source of the messages as well as having been able to get video of her posting at least one.

“Dad and I suspected that Maggie and the Empress were one in the same for quite some time. There was just far too much coincidence in you finding her close to where that evacuation ball would have landed. Then again, and don’t hate him for it, Phil Radnor did an extensive background check on the St. Philips family.”

“And you found out that the twin’s mother actually died years before Maggie... *she* was supposed to have been born. Tom, I can’t—”

“Not important now, Harlan,” Tom stated. “What is, is to get to the bottom of what she intends to do now? I take it that she has gone into hiding.”

Ames nodded, looking at the floor.

“Okay, then let me talk to Gary and his people and see

what we might do.”

It was then that Harlan told the boys about the raid on the secret quarters of the Empress days earlier.

Both of them were horrified at the thought he could have signed her death warrant.

“I didn’t have a choice, Tom. In the end a death by being instantly frozen is far kinder than letting her be torn apart at the hands of the colonists. Remember, most of them are tribal people from the mountains of the Philippines and come from a violent past that includes roasting criminals alive. It’s the only way to assure that I have Maggie’s body to lay to rest at some point.” He looked into Tom’s eyes and almost pleadingly added, “I had to. Don’t you see?”

He explained how the quarters had been flooded with the liquid helium. Once pumped back out there were six bodies inside, all previously dead, all stabbed through their hearts.

Each one was a known or suspected member of the Elite.

But, there was no sign of the Empress.

The search had been thorough even though communications from the spacesuits of the colonists could not connect with those of the Earth forces, a system of hand signals had been agreed on before entering.

They had repeated the search and still found no sign of the Empress other than a nasal inhaler sitting beside a computer terminal in what must have been her sleeping quarters.

But, she had been there only three hours before when the hackers watched her post the most recent of her poison pen notes to everyone. This one, a photo of the bodies in her chambers, had simply stated:

Tom Swift just embarked on a killing spree on the Moon.
You could be his next victims!

E∞

Tom, Harlan and Bud were discussing what the next steps might be for the colony when Gary Bradley walked into the office. His helmet was flipped over his shoulders and his face was gleaming with sweat.

His report of the most recent failure to find a trace of

Maggie took none of them by surprise.

“Have Phil get another team up here,” Tom instructed. “Take the *Challenger*. Fifty men by day after tomorrow. We’ll do a room by room search if necessary!”

* * *

Five days later, and with no further sign of the Empress, a strange box-like craft touched down on the lunar surface near the sight of the forthcoming elevator. High above in an orbit twice that of the comet was the *Sutter*, now filled with the necessary foam and gas to be used to “feed” the box that would soon create the shaft of the elevator.

It would be a difficult task to perform; both space craft would be balancing only on repelatron power for the duration of the extrusion process, but it was a necessary step in solving both the colony’s and California’s water problems.

Tom’s decision to build the twenty-mile shaft not as a solid spire but as a hollow pipe, along with the idea for notching the outside, remained; the platform that would surround the central shaft would need them for climbing up and down. The plan was to only bring ice down on the outside and pump water back up inside the pipe.

Riding on its repelatrons, the boxy extruder headed to a point twenty miles above the lunar plain and soon began sending out the first of the continuous pipe. As it came out, a ring of smaller repelatrons—similar to the ones on the Earth pipe—was added to the bottom along with a solar power array. These would help to keep the pipe steady and assist in lowering in down slowly and under complete control. Of course, the Sun’s rays would cease reaching around the curvature of the Moon before it reached the eight-mile elevation, but until then the panels eased power drain from the small nuclear power ball.

“It’s looking good, Tom,” Bud said from his seat next to the inventor inside the *Challenger* as they observed the operation from about a mile away.

“Yes it is,” the inventor agreed. “Just two more days and this part of the elevator will touch down. Then we go back to the Earth to finish that pipe where the real fun begins.”

* * *

Three spacesuited figures moved slowly between the lunar boulders and around the debris left from the drilling of the anchors. Inside the colony it was approaching one a.m.

Outside, in the perpetual dimness of the dark side, the figures were difficult to see... had anyone been awake to observe them.

No guard was awake in the tower; the two colonists assigned there had drifted off shortly after taking over.

Each of the figures pulled a small sled behind them. Even in the low lunar gravity it was hard work, especially for one of them.

Grating her clenched teeth, she leaned further into the makeshift yoke around her upper body and pulled on. She was determined to not let a word out for the other two to stop or to make any sound at all. They would have gladly paused for her, since they were too far out of condition to be doing this kind of strenuous work.

But, to let the Empress know that they could not go on, and she *could*...

They passed the new shaft barely giving it any notice, and plodded on, soon separating, each going out to an anchor. Solid and imposing, with a high tension cable angling up toward space, they seemed indestructible. The tower, sitting more than a half mile away in the center of the ring of anchor looked flimsy. Thin, because of its height and distance, it could not compare to the very substantial anchors just a few feet away.

Each of the suited people went to work, each doing the same thing.

First: A drill unfolded and snapped into position from the back of each sled. It drilled down several feet next to the foam-filled anchor holes, and came back up. It was repositioned three more times around the entire, visible anchor.

Second: A bundle of fairly crude high explosive was lowered into each hole and pushed down with a stick. Wires trailed up from them.

Third: The wires were attached to a timer and battery pack on each sled; the timers had been pre-set to go off at a certain time insuring that they would explode in unison.

Four: An expanding sealant was poured into each hole to minimize the explosive blow back effect and to drive the maximum destructive force sidewise into the anchor itself.

Time was running out, and the work had taken far too

long. Two of the space suited people made it back to the rendezvous point. The third was half way there when the explosions happened.

As had been hoped, all three cables separated and were pulled out of the ground, snapping wildly into space. But, one of them still had a hunk of anchor and cement attached. As it whipped up the cement piece shook loose and hurtled into the third person's back, crushing the air tanks and ripping the suit—and the body—wide open.

Inside the colony klaxons sounded, and the construction crew lead by Tom and Harlan went into action. Most had been sitting in a late meeting discussing the next day's work when they were first jolted by the shockwaves of the explosions. This was followed a few seconds later when the tower guards awoke and sounded the alarm.

With thoughts now only on finding out what had happened, fifteen men raced for the large airlock, suited up, and poured from the outer doors three minutes later.

The *Straddlers* were sitting outside the airlock, ready, so as many men as could fit on them jumped aboard and all were sailing up and over the lip of the crater in seconds.

Tom gave out a strangled cry. He could see what the problem was from there even if he had no idea what the cause was.

In as few words as possible he barked out orders to the rest of the men.

The tower was leaning toward the colony, the cables on that side appearing to still be attached to their anchors. It had been the sudden release of the three cables on the far side that caused the overloading of strain on the nearest cables.

Those other cables, and the automatic winches far above them, were now pulling the whole tower toward one side.

Tom, seeing the leaning tower, radioed up to the *Sutter*. She was due to pass overhead in five minutes.

"Hank? Get me three of the Attractatron mules out of your formation and down here pronto!" He described the situation.

"I want them grabbing hold of the tower about three-quarters of the way up, evenly spaced around the pipe, and holding it in place. We've got one shot and I'm afraid it has to

happen in the next couple of minutes.”

He cut the connection. The *Straddlers* were at the base of the tower by now.

Bud jumped off and, at a few words of command from Tom, took over the situation at ground level. Tom hopped off the two-man vehicle and ran to one of the larger construction *Straddlers* four of the others had just climbed off of and had it space-bound in seconds.

He headed upwards, stopping three-quarters of the way to the top. With none of the mules yet in sight, he set the Attractatron in front to grab onto the tower and let the tower lean onto it. With contact made, he threw the machine into high and it push with all the power it had. His instruments redlined within seconds, but Tom just kept at it. He was fighting a losing battle, but a minute later, and after hearing Bud's whoop of delight, the mules joined him, locking onto the tower.

It happened just in time. He backed off a half mile and watched. A thought occurred to him so he radioed down to Bud.

Within two minutes the flyer had the construction team letting off tension from the four remaining cables so the mules would not have to over exert.

It was too late for one of them, however.

The little mule that Red Jones had power troubles with during the comet capture simply gave up. Its power system began to short out, and it started to tumble downward.

Tom looked down and saw what was about to happen. The mule, now out of control, was heading away from the tower, and toward the colony below. He yanked his *Straddler* around, heading for the falling mule.

The inventor gave no thought for his own safety as he rammed into the falling mule. His *Straddler* bucked and flipped end-over-end twice before he regained control. Looking down he could see he hadn't quite managed to redirect the falling mule, so he put his vehicle in a nose-down position and hit the acceleration. With little above him at that moment for the repelatrons to connect with, he failed to accelerate.

Close to despair as the mule was now just twelve miles above the upper dome, Tom's heart raced as his *Straddler's*

repeletrons finally connected with something, giving it the power and speed he absolutely needed.

He risked a glance behind and was in time to see the comet as it passed high overhead. His rear repeletrons lost connection ten seconds later, but he now had the necessary speed. Using his others he got the vehicle back to level and twisted it around so it was falling at the same rate as the mule.

He felt a little bit of sadness as he moved forward, giving the craft another good push, this time away from both the colony and the team below.

“Farewell, little mule,” he whispered as the craft began its final twisting and turning before slamming into the Moon with enough force to nearly pulverize it.

* * *

The two remaining saboteurs disappeared into the lunar landscape. When the construction workers finally located the body of the third saboteur a quarter mile from an anchor point, only the head in its helmet was intact—that is, if a disembodied head could be called *intact*. The nearby suit and its contents was mangled and barely recognizable as having ever been human.

Only after taking their find to Doc Simpson was the head removed from the helmet.

It had belonged to the, now, late Doctor Otto Ocampo.

* * *

The Empress was furious. The destruction of the anchors didn't stop a thing. In fact it seemed to accelerate the building process. Nothing she did lately came out right.

Ocampo was dead and VanBrown was ready to cut and run. She could not have that. The man simply knew too much, but he was also very helpful. A new plan for how to handle him was needed.

Once back in the morgue she turned to VanBrown and smiled. "You handled yourself well." She handed him a bottle of water from her supplies. He accepted it with trembling fingers; his only wish was to get the heck out of there, hopefully with his life.

"I believe that you are being wasted as supply manager. I think General-Overseer of all the departments would better

suit you. A man of your intelligence must be... appreciated."

VanBrown took a long swig of his water. His Adam's apple bobbing up and down.

"I have things hidden in various places, Things that will return this colony to me. I don't need the approval of the people to rule them. I need people like you who know what to do and will can carry my orders out."

He sat straight in his chair, his head now held high.

"I need items moved and assembled." He nodded his head in understanding. "These things you don't have to do yourself," she added. He was now nodding with a smile.

"You only have to find people with..." she hesitated for a moment, "let's call it moxie, and no brains. You know people like that. Don't you?" And she smiled at him before taking a long drink of her own water. She almost choked on it as she saw his face turn from fear to smug assurance.

"My Empress, tell me where these items are and where you want them assembled, and it shall be done." He stood up and bowed to the Empress. "My loyalty is yours, and I'm at your command."

"Good! As of now you are my General. I will leave this place once you can find me a better, safer location to stay. With the good Doctor dead it won't be long before the dogs come sniffing around here and find this place."

Chapter Nineteen: Moments of Many Truths

WITH the remaining four intact cables now working in conjunction with the repelatron ring at the tower's top, things were finally deemed to be "safe" at about seven a.m. that morning.

Hank had already dressed down the tower guards for their inattention and another team of observers—this time five of them with orders that at least four had to be awake at any time—was posted.

Tom, Bud and the rest of the construction crew dragged themselves back to the colony and entered through the airlock.

"I want to turn off the gravity on my room, take a hot shower and climb into bed for fifteen hours," Bud stated.

The other men echoed his words.

"Thanks to each and every one of you," Tom told them as he spotted Harlan coming into the storage room's other end. "You all worked to save both the elevator as well as this colony. I can't believe anyone in their right mind would try to bring it down, and right on top of the domes, but... well, thank you. I think the Administrator has a couple words."

Harlan had just reached them. They had all stopped.

"Go ahead and keep getting out of those suits, men. I heard a little bit of what the skipper said, and I want to add my thanks, and that of the citizens of this colony. What you accomplished in the past six hours probably saved many of our lives."

It was then that he saw the lone helmet. He gulped and turned to Tom.

"Is that—" he asked in a hoarse voice.

Tom shook his head. "We don't know who that is, but even out in the vacuum, the flesh color is too dark." He patted Harlan on the shoulder as he walked past. "Someone get that to Doc Simpson and let *him* tell us who it is... was."

He and Bud walked to the other end of the room and disappeared into the corridor.

“What now?” Bud asked.

After giving it a moments thought, Tom replied, “We take the extruder back to Earth orbit and finish that down pipe. The we cross our fingers that it all works!”

* * *

The Empress should have been happier. Once more she was in a position of command, although limited. More would come and soon! But, during the day while she tried to sleep, she had nightmares. Harsh, chaotic nightmares of her past. Things that she did not want to re-live. Things she had forced into the back of her mind. Back to where Maggie now resided.

By night, when she rose to work on her plan, her belly still felt terrible, her vomiting coming nearly every time she awoke. Without access to the medical computers there was little she could do except clench her teeth and get through it.

That night memories came flooding back, ones she had thought were long dead.

* * *

Ten year old John swung his bamboo fighting stick at Maggie's legs. She leapt up and somersaulted over it at the same time sweeping out with hers. John took a blow in his shins. Angry, he jab out and hit Maggie hard in the chest. Instinctively she threw her stick outwards and hit him across the top of his head.

He yelped in pain and reached for his sister who was now kneeling on the ground clutching her chest, having a hard time breathing. He pulled her up onto her feet. Tears of pain ran down her cheeks, but she did not make a sound. He snapped to attention and bowed.

"Again you have won, my sister." He was proud of her in a way that bordered on insanity. "I may be stronger than you, but you are quicker and you never cry out in pain. This I don't understand."

"Father doesn't hit you as much as he does me. I have learned to hide the pain—if I cry out, he hits me again—while you, my brother, try to fight back. You don't see me with black eyes or bleeding lips."

"No, I don't. I also don't have red cheeks and a sore rump." Their Albino skin so easily showed every bruise.

"Someday, my brother, he too will know the pain of being hit."

"Yes, my sister, one day he will."

* * *

The eight year old twins had deliberately wandered farther than they should have, each daring the other to go further. They made it past the mouth of their valley and could see the seldom-used road that ran by. It was the middle of summer and yet the boy and girl wore long tunics with billowing sleeves and oversized straw hats. Their pure white skin burnt so easily in the sun.

The only other clothing they wore were sandals. They thought nothing of their partial nakedness; they were accustomed to it.

They heard the clapping of a horse's feet before they saw it. It was unkept and the rider was in even worse condition. His clothes were filthy, ragged, mismatched and, even from where the two children stood, smelly. He had a jagged red scar down the left side of his face.

The twins did not fear strangers; they stood by the side of the road and watched as he approached. Every once and awhile people making pilgrimages would come to their little settlement to seek the wisdom of the monks that live there.

The man stopped his horse a few feet away and inquired about them. He spoke a dialect that they understood, so they told him where they came from. He looked around and could not see any adults from his vantage point, so he asked if there were. Laughingly he got off his horse when he heard there were none.

He bent down before the children and scrutinized their faces. Pure white skin and red eyes he noted to himself. He could see no eyelashes or eyebrows. He swatted the hat off the girl's head and was amazed that there was no hair.

The boy jumped at the stranger for what he had done. Angry at the boy's attack, the man stood up with John clutched in his hands. He shook him a little and laughed as John's arms and legs flailed about. Being as light as a feather, the man threw him way. The boy, screaming from pain and anger landed in a crumpled heap some ten feet away.

The girl tried to run to protect her now silent brother. The brute grabbed her next and, taking her tunic neckline with

both hands, he tore it open. She was naked underneath. The man's gaze went from her head to her feet and back again.

Being only eight, and seeing that she was all skin and bones, he pushed her away. "Not worth the effort," he murmured as the girl looked at him in horror. She was desperately trying to memorize his face. The scar, the bloodshot, squinty eyes and blackened teeth. "I'll be back later," he warned the girl, "after you've added some meat to your bones." He then reached out, picked her up and threw her to land along side her brother.

Laughing, he got back on his horse and rode away.

An hour or so after that encounter one of the monks coming back to the settlement found the injured children and took them back home.

Their father was called from the cave where he worked on the lost Sanskrit texts. He looked at them and told the monks to never to call him again because of the twins.

"They probably deserved to be in the gutter," he stated with a smirk of disgust, and for good measure he slapped both of them for causing such trouble.

The monks had a conference that evening where they decided among themselves to start training the twins in their version of self defense. The only problem was that Maggie had developed an aversion to being touched by men and would not let them get near her.

John had to take her out into the fields and show her what he had learned each afternoon.

* * *

A flaming ball blazed a trail across the late night sky. The lone monk, sitting atop the platform outside of the animal's hut, watched as it struck the mountain top, bounced into the air and disappeared over the top. He thought that it was an airplane that had crashed. He knew of them, but never had opportunity or desire to ventured near one.

Life was sacred to his religious notions, so he set off to help, even though he felt inside his heart there could be no survivors. Not the way it hit the top of the mountain and bounced over it.

It was becoming daylight by the time he reached it. Forcing his pack animal up the steep mountain side was a Herculean effort in itself. What he found was something he

had never seen before.

It must have been a silvery sphere at one time, but now it was a blackened, torn across one side, and what had been there was now mostly smashed to ribbons. He could see what must have been a doorway at one time, but it could not be opened in it's present shape. Not that it was needed. A quarter of the strange object was more or less wide open.

He hesitated for a moment, reciting a small prayer for the dead because no one could have survived, and tried to find his way in.

It was like trying to make his way through a collapsed building. The only thing that made progress possible was that nothing was still fastened to anything else.

He had just removed several pieces of what he thought could only be electronics of some kind, when he saw a foot sticking out from under a long piece of metal. On top of the metal sat all kinds of tanks.

Pushing through the mess he knelt down to look under the sheet of metal. The person was in a tight-fitting flight suit; he had seen pictures of airplane pilots dressed like that, although this one was definitely newer. By many, many years. He got the metal sheet up and shoved what might have once been a seat of some sort under the end. The monk crawled forward and reached into the collar of the suit, feeling for the neck, His fingers, nearly frozen from the cold searched with a mind of their own. At last they connected with skin over an artery and found a pulse.

Encouraged that the person was alive, he crawled backwards and heaved the tanks off the sheet of metal and carefully turned over the acceleration couch. He pulled the body as far out as he could by the feet and used the seat to drag the pilot out of the wreckage and back down to his hut.

* * *

Three months later, the Empress returned to the E-Vac ball. Getting there had taken the better part of a day. She was so exhausted that she made a small fire and tried to eat some of the food she had with her. She slept most of the night, only waking long enough to add fuel to the fire.

By noon the next day she had pulled out a small pile of usable items. They were mostly small emergency repair tools and the box they were stored in, plus a few of the loose wire fasteners. Not much, but the tools could get her a few

hundred dollars, and that meant a way to get to civilization. From there she could make a new start.

A shadow fell on her as she heated water to make a hot drink for lunch. She was waiting for the monk to show up with the pack animal to take what she wanted back.

She looked up and saw not the monk, but a ragged dressed man with long unkept hair and a jagged scar running down his cheek. He had a long thin knife in one hand and a wicked smile on his face.

The Empress gasped not in fright, but because a memory out of her past flooded her mind. She relived, for a moment, the tearing of her clothes, and the glaring of his eyes on her young body.

"Praise, God!" was all she said out loud before she stood up before him. With one quick movement she pulled her long robe over her head and threw it aside along with the cap she had on.

The man stood there, his weapon forgotten in his hand, looking at the naked, hairless woman.

"You wanted me once," she hissed at him in his dialect. "Am I not more pleasing to you now that I have breasts?"

Years of drunkenness and drugs had robbed him of that memory. All he could see now as a woman, and for some unfathomable reason she wanted him. Who was he not to take what was in front of him?

Grunting, he stepped forward, but a body knocked him off his feet. Years of street fighting kicked in and the once forgotten knife found a spot in the old monk's side.

The Empress jumped over the fire and tackled the bandit. They rolled a few times as the Empress continued to hit the bandit whenever she could. She was stopped short against a large rock. The bandit did not waste a moment and scrambled back to his feet.

He had lost the knife and he was now wildly looking for something to use against the woman. She might have been naked, but she was more than he cared to fight without an advantage of some kind.

Spotting the tools, he staggered toward them. The Empress flung herself onto his back. He hit the ground and grabbed for anything with his outstretched hands. Bucking, he threw her off and made it back to his feet, backing away

from her.

She slowly moved towards him, a low, primal growl issuing from her mouth. He kept backing away, but quickly found himself at the edge of a drop-off. He had no choice but to hold his ground.

The Empress, bending low, ran at him at full speed. She took him in the gut with her shoulder and off the ledge they went. They bounced twice off the slopping wall and hit the base of the cliff together.

Her arm snapped on their first bounce, and her chest took the blunt force of the second bounce with him being on top of her at that point.

It was on the initial bounce that he lost hold of the fastener in his hand, and it preceded them down and landed against a sharp-edged rock.

He landed first, his neck broken, his miserable life now over.

She partially landed on him but her momentum rolled her to the side and her head hit the rock that the fastener lay upright against. The force of her head hitting it cocked the pin, the edge of the rock cut her scalp open, and the fastener fired it's filaments into her skull.

The old monk was bleeding from his side, but he slipped and slid his way down to the Empress and, finding her still alive, wrapped her head the best he could. He then tied a long length of cloth around his own wound and left her to make his way back to the pack animal. He spotted the bandit's horse before he was half way back up and used it to get the Empress back to the hut.

* * *

With everyone now openly hunting for her, the Empress' efforts to make good her final revenge took on a more urgent pace. She was running out of time. She discarded her original plans and simplified everything to two items: the core drill; and one of the suitcase-size nuclear bombs she and her brother had brought up for defending the colony.

The atomic drill—another of Tom's inventions the former Masters had stolen and duplicated—was still in the mountain reservoir in one of the two partially complete drain tunnels. If she remembered right, it was on its launch track, just waiting to be turned on. She needed to change its computer

program a little, and add on a caboose filled with Helium 3 and Uranium 235 that would follow behind it, but if her brother had been right, then Earth was in for a great surprise in the near future.

It took hours of work using strength she barely possessed, but the track was finally swung around and pointed toward the crater site of her former Shangri-La. From this point she could be assured of a straight trajectory to a point below the upper dome.

Instead of a quick death for everyone she was now going to 'poison the well'. And after all that ruin the work of purifying the water. No one, absolutely no one, was going to be able to use it.

She had four hours before the drill started. Time enough, she knew, to prepare for her showdown.

The suitcase bomb would need to be stripped down to the bare minimum and fitted into a bulky backpack that even she could carry. Now she only had to wait for Tom Swift to come and start filling his precious golden spaceship.

* * *

The Empress felt the vibrations of the pager. *VanBrown!* It was the signal she had been waiting for. The Empress had been sitting for two hours, fuming at the apparent failure of her attempt to drill under the colony and poison the reservoir; the drill had disappeared into the hole, but it never arrived at its destination.

Moving through the final corridor, she took one of the small pocket phones the colonist used and punched in Harlan's number.

"I'm back!" she said cheerfully when he answered the call by taping the **ACCEPT** button on his spacesuit sleeve. No ID number showed on the helmet's heads-up display.

Harlan's body went rigid for a moment as he collected his thoughts.

"Maggie?" he asked hesitantly.

Mocking laughter was her reply. "Always the optimist, Harlan, but not this time. Maggie is dead for all practical purposes. Live with it."

"Then why are you calling? I'm sure it's not just to chitchat?" He was quickly cutting Tom into the call after-

hand singling him to just listen.

"I'm sure, darling, that you are trying to trace this call, but I'll save you the trouble. I'm sitting on your precious water. Let me rephrase that. I'm on top of the airlock to your precious water, and if you want to be able to process that comet and use any of it you'd better get you're ass down here. And bring that adorable Tom Swift with you." The line went dead before he could say another word.

They looked at each other and saw the same expression of shock and bewilderment. It took them a half hour to get back to the colony and out of their space suits. By the time they reached the water processing plant they'd formed a plan of action. And, split up.

Harlan entered by the main door and Tom by the back door. To their surprise the room appeared empty. The ceiling-mounted video monitor camera swept over the area—showing on their visor displays—coming to a halt looking down at the aluminum superstructure recently put in place thirty feet below the floor. It was visible, hanging just above the enormous reservoir's arching roof.

The Empress stood next to the only hatch built into the multi-layer Tomasite and carbon fiber pressure membrane to access the reservoir itself. Next to her sat a package of some type.

Harlan and Tom were forced to use the long ramp on the other side of the reinforced double doors that crisscrossed down to the superstructure. Smiling, the Empress watched as they came closer. They stopped within twenty feet of her.

"Smart," she told them as she held out a palm size video screen. Evidently she had been watching them for some time.

"We're here, so what do you want?" Harlan demanded of her. His heart was being torn open by conflicting emotions.

"Just listen to the man, Tom. You think he's still in control. He's not." She held up her other hand and showed them a small transmitter in it.

"See this? *This* is control. I let go of the switch and we die."

"What do you want?" Tom asked this time.

"I want you to feel the agony I'm feeling right now. To know that you are going to die and no matter what you do you can't stop it."

"Empress Shangri-La, I did not cause what is killing you. None of the people here in the colony caused it. So why take revenge on them?"

"Oh, don't you try to wiggle your way out of the blame. You're the one who killed my brother. You're the one that left me in space to die..."

"No," Tom heatedly shouted back to her. Then in a calmer voice. "You're the one who went chasing after us without checking on the space worthiness of your ship. That one is on *you!*"

"Stop it," yelled Harlan at both of them. "Maggie, listen to me..."

"Your wife, Harlan, as I just told you, is not at home. I've moved in and that's the way it is staying." A twinkle of merriment filled her red eyes.

"Then what do you want?" a very exasperated Harlan asked. "For us to beg for our lives?"

"No, just the opposite." She bent down and punched in the code to open the hatch. As unsealed and hissed open she stood back up with what now looked like a gun in her hand instead of the video screen.

"Tom, be a good boy and climb down into the chamber. I'm going to give you a taste of what kind of hell you put me through while I was stranded in space."

"What kind of nonsense is this?" he retorted.

"No nonsense at all, and I'm going to give you a chance to save the colony as well."

"How's that?"

"Once you're inside I going to give you this little bomb that I've made, and you'll have until I'm tired of talking to Harlan, or I forget that I'm holding the switch to try to disarm it. That's about as much chance as I had to make it back to Earth. Fair enough?"

Tom looked at Harlan and he just shook his head.

"Move it, genius boy, or I turn this ultrasonic adhesive removal gun at you, and you know what the vibrations will do to your internal organs at this close range."

"Tom?" Harlan whispered to him.

"Got it covered—just help her, and we're golden," Tom

whispered back.

"No talking! Move it, or all of us can die right here and right now."

Tom slowly walked to the hatch. The Empress moved off to the side, but never let Harlan out of her sight.

"What's to stop you from just opening the second hatch to the partial vacuum once I'm down there?" Tom asked as he eyed the twenty foot wide cylinder that only contained a ladder, a bottom hatch and a few wall-mounted controls used to pressurize the cylinder so a maintenance man could then drop into the reservoir.

"Just my word. Take it or die right now." Her hard, cold voice told Tom that she meant it. He climbed a few feet down the ladder and looked back up to her as she dropped the pack to him. As the hatch started to close Tom heard her call out:

"Space is dark, so will the cylinder be. See you in hell, Tom Swift!"

And then there was darkness.

Harlan took that moment of distraction and dove at the Empress. Expecting a move of some kind from Harlan, she sidestep him and lashed down with the butt of the gun. She hit him just below the shoulder blade, and that was enough to cause him to land flat on his chest instead of rolling back onto his feet.

His body convulsed with pain for a moment as she let a short burst of sonic waves cross over his body.

"Come on, big boy, is that all you got?"

Harlan slowly got back on his feet, and took a step toward her. "Maggie," he called out, "I know you can hear me. You've got to stop her. For our children, you have to."

"Harlan, you're pleading to a dead woman, how pathetic can you get? 'For our children?' For crying out loud!"

"They're you're children too. Don't you want them to live?" All this time Harlan kept taking small steps toward her.

"For what?" she shouted back. "So you can beat and torture them for things they had no control over?"

"Not all men are like..."

"To hell they're not! My father was, the monks never

really tried to stop him, so they must have condoned it. Even my loving brother liked to hurt people." Her face was red with anger.

"Then why didn't you leave when you got older? You could have stopped them?"

"And stop the only thing that men respected. Look at me, Harlan. What do you see? Most men see a freak and want to see what makes it tick."

Harlan had no answer for her. For him she was the most beautiful woman in the world.

"When I dished out more than they could stand, then the shoe was on the other foot. And, I had to keep that foot kicking them as hard as I could all the time or they would turn on me. My brother was the only one that understood and loved me."

She was crying and tears were rolling down her face.

"I... love...you, Maggie," Harlan told her as he emphasize each word. "Don't you understand, I don't care if you are the Empress or Maggie Ames. You're one in the same. Both of you make one complete person!" He was now within striking distance again.

The Empress' face was contorted in pain. She raised both hands and tried to rub the side of her head with them. The transmitter slipped out of one hand, and for a second she looked at the sonic gun in her other.

She then looked at Harlan as she pointed the gun at her own head. "Harlan, I love you." And she pulled the trigger.

"Nooooo!" came from two separate voices at the same time. Harlan had Maggie in his arms before she had a chance to fall to the hardened membrane.

Tom popped the hatch up, accessed the situation and had his miniature walkie-talkie out in seconds, radioing for medical help.

The Empress had made her final mistake when she sealed Tom in with the bomb, She didn't know that Tom Swift always carried a miniature set of tools disguised as multicolored pens in his pocket.

* * *

Doc stood by Harlan's side. Maggie lay in a private hospital room surrounded by all types of life support

equipment.

"You're sure Doc, there's no hope?" Harlan was totally empty of emotions. He felt that he had gone through the preverbal wringer.

"None at all. She's brain dead. That sonic gun turned most of her cerebral cortex into jelly. Life support is the only thing keeping her body functions going."

"The twins?" he asked.

"I did an ultrasound. They're fine, and I don't see any reason that we won't be able to hold Maggie stable until they are old enough to survive a cesarean."

"Thanks Doc, but do me one favor. Can you move another bed in here. I want to be near her as much as possible."

"Harlan, I don't recommend you doing that."

Harlan looked at his friend and nodded, but he stated simply and with no room for argument, "I don't care what you recommend, Greg. I'm staying here until her very last breath. I need her to know that someone truly loves her no matter what and will not abandon her."

Chapter Twenty: “It’s Raining, Men. Hallelujah!”

THE moment of truth was fast approaching. In order to secure permission from nearly a dozen federal and state agencies, a strict schedule had been provided, and the date given—three days hence—was beginning to look like an impossibility.

The first obstacle was, obviously, the damaged anchors and the missing guy cables for the elevator. The Elite saboteurs had done a terrible job on them, and by that everyone meant that they did a very clean, neat and effective job.

One of the remaining cables was barely holding together where it had been overstressed leaving just three to take most of the strain. With them all on one side, there was strain to be sure!

Jake Aturian at the Construction Company had worked a near miracle in getting the cable braiding machine back out of storage, set up, and was cranking out the complex weave of metals and fibers as quickly as he could, but at the rate of just under two miles an hour, it was going to be very, very close.

“Where do you stand, Son?” his father asked as Tom breezed into the shared office.

“As long as Harlan and his folks along with Gary and his enhanced Security team can keep any more of the Elite from breaking things, I should have the cables installed up there fifteen hours before we are supposed to make the initial water drop.”

Damon whistled. “Are you certain I can’t try to get Pete Quintana to make a few threats and keep your window open another twenty-four hours?”

“I’d love to, but our comet isn’t just sitting up there going around the Moon. It is picking up enough heat from the Sun that it is softening on the surface and the lunar landscape is about to get its first rain in forever. No, I have to get this in on time so the machinery up there can continue to process more and more of the ice and we get more and more water to drop out west.” He shrugged; there was little more to say.

Hurrying from the room, Tom raced down the hall, down the stairs and out onto the tarmac of the parking lot. Less than a minute later he was driving out the main gate, heading for the Construction Company.

“I’ve got some good news for you Tom,” Jake said instead of a greeting. “Hank Sterling came by last night and tweaked the formula for the cable to have ten percent less AluminaTitanium and added in a pre-twisted core of Tyvek. Now we’re running at about forty percent more cable per hour than yesterday, and the darned stuff is five percent stronger!”

The relief Tom suddenly felt almost made his knees buckle.

After taking a look at the new cable he thanked Jake and left. On the way back he TeleVoc’d Hank.

“I owe you fifty steak and lobster dinners, or at least a year’s house payments,” he told the engineer.

“I already own my house outright. I’ll take the dinners, though. And, I’m happy to have been useful.”

Tom next TeleVoc’d his father and gave him a very brief description of the change and the results.

His final swing through the gate, along with a sharp left turn, took him out to the hangar where Bud kept his office.

“Come on, flyboy,” Tom ordered. “You and I owe the ladies a night out because we’re going to be gone for the next three!”

The dinner was subdued even with Bud trying his best to keep the conversation lively.

“I guess we’re all a little nervous about your water elevator, Tomonomo,” Sandy finally said during a lull.

“I think we all should have a more positive attitude about this,” Bashalli suggested. “Thomas has been up against even worse odds in the past. He won then and he will now!”

They all agreed—even the inventor who was still apprehensive about further acts of sabotage. After all, only a portion of the known Elite members had been effectively neutralized.

But, he smiled and nodded with the others.

Two days later he, Bud, Hank and a team of space

construction specialists headed skyward. As he had done only a few times in the past, Tom had the *Challenger* set down right in the grounds of Enterprises the previous day to make loading everything faster.

The cable spools were brought over from the Construction Company and the first two of them hoisted by crane up to the rack atop the ship. It would be necessary to make two trips up and back to get all of it to the lunar surface.

But, things would go on at a furious pace while the ship was making its return run. Tom and Bud would remain behind to manage the construction team while Hank would head back after installing the first spools. He would return with the second set as well as fellow pilots Red Jones and Zimby Cox.

During his absence a carefully choreographed balancing and tightening act would take place with all five of the current cables.

Tom felt an incredible sense of relief when he took Harlan's report that the new anchors had been sunk, expanded and sealed tightly into the rocky under-layer. In the coming week or so—once the water deliveries began and were proving to be of help—he intended to devise a security system that would probably be a combination of some type of unassailable fencing along with both video and active alarms.

Anyone approaching within one-hundred feet would set off the alarms and one of the teams of colony citizens currently being trained by Gary Bradley's men to take over their positions would respond.

The end of the first spool with its twenty-two miles of cable was picked up from the *Challenger* by two of the larger *Straddlers* and pulled out to the first anchor point. There it was looped through the ring attachment point and then back down into a ten-foot hole in the middle of the five-foot-wide anchor where it was soon tightened down and sealed with a fast-setting solution that would harden over the following half hour.

There would be no way short of destroying the anchor to pull it back out.

The spool was hauled upward on the top of the *Challenger* to the upper end of the pipe. Once there, two special versions of the *Straddlers*—with incredibly powerful repelatrions allowing them to fly at the altitude along with supporting the

nearly eleven tons of spool and cable—went to work.

One of the two-man teams made the Attractatron connection to one end of the spool while the other grabbed hold of the cable end. They needed to pull it off and away from the spool by nearly three-hundred feet. With the empty spool back on the *Challenger's* rack, the end was looped through a ring and connector similar to that in the anchor below. The difference here was that each of the attachment points around the fifty-foot-wide ring circling the top of the elevator pipe featured winches that would be used to tighten each of the lines.

A simple computer and electronic tilt sensor calibrated for use above the lunar surface would ensure that the top of the pipe was straight above the base point, accurate to within less than an inch.

As soon as the second spool had been attached back on the surface and raised into position, Hank radioed to Tom.

“I’m heading back to Enterprises to pick up the other spools. See you in about six hours!”

The ship moved aside slowly until it was about a quarter mile away, aimed its repeltrons at a safe area of the surface and zoomed away, disappearing to sight within a minute.

New cable two—of the seven total—was about a third the way around from the first new one raised. It joined the others and was attached in under an hour.

The two teams headed back to the surface, a trip taking them nearly thirty minutes. Then, everyone except Tom and Bud headed down to the dome for a rest period.

“Why are we hanging out, out here, Tom?” Bud asked looking around.

“I don’t know, Bud. I just have this feeling the Elite isn’t finished trying to foil this project. I can’t figure out why, either. I mean, everyone down below will benefit from this. The colony will have its reservoir of fresh water, and they will be receiving payments from back home allowing them to do more to supply themselves. Why in the world would anyone want to sabotage their own success?”

Bud shrugged, a motion that was difficult to detect inside the suit.

“You’re right; it doesn’t make sense!”

Tom pointed back toward the visible dome. “Oh, heck!

Let's go get a hot cup of coffee. Hank and the guys won't be back for until after dinner."

* * *

As those below waited for the final two cables to be attached, they finished encircling the pipe with the elevator platform. Sticking out about twenty feet from the pipe all around, it was more wire basket than elevator, but that was all it had to be.

Somewhat crude because of the necessary haste in which it was designed, it needed to be loaded and balanced to within about seven percent of an even distribution, but the powerful traction cogs would be able to raise and lower up to twenty tons per load.

It would make the twenty mile trip down in nine minutes and any outgoing trip—empty—at twice that speed. For the time being nobody expected it to be raising anything.

When the signal came, Tom took command of the program to tighten the last cables. As he silently hoped, everything went according to plan with the tensions as even as desired and the top rock solid steady.

He decided to run the elevator up and down several times to check its ease of travel. It, too, met and even exceeded his expectations.

"It's time, gentlemen!" he declared. Harlan gave him a nod so the inventor activated the auto program for the mules shepherding the comet as it traveled a few miles farther out. He had decided to try things on automatic rather than station a team of men on the comet.

"They will now break off chunks and start to bring them to the top of the elevator. Once we have a load it will come down and the team can transport those to the conveyor. After that, we have to trust that Sam Gustavvson's equipment does what it is supposed to."

* * *

Saclolo and a team of fifty of his hand-picked and most trusted—and armed—men worked their way around the back of the dining room in the fourth dome. As usual for this time of day it was packed. But, one area containing eight of the ten-man tables was curiously standing alone with at least one set of tables kept clear all around it. Almost every seat at these tables contained a male colonist.

He made a silent motion to six of his men as they moved through a nearby group of regular colonists.

Nervous glances shot around this group. Without any notification or even rumors, they somehow knew what was about to happen.

And, they feared the worst. And, that fear spread to other people around them.

The first time this had occurred, when the Masters had first disappeared, there had been bloodshed. Twenty-eight of the Elite and more than two dozen colonists had perished as knives and garrotes pierced and strangled.

Saclolo remembered it well. He had taken a blade to his left side. Not enough to cause permanent damage, but the man next to him, his uncle, had not been as fortunate.

A piercing whistle rent the air and everything went deathly quiet.

Almost as one man, the Elite rose from their tables, unbuttoning and lifting their shirts and turning around so that all could see they were unarmed.

One man Saclolo recognized as having been a particularly evil taskmaster, and the one who had nearly strangled him in his sleep when he and Magadia had first been kidnapped back on Earth, stepped forward.

He held out his arms, palm up.

“We will cause no troubles, Saclolo. All we can do is offer you our lives in return for the safety of our families.”

The men behind him, eyes cast to the floor, nodded.

“Is this the end of the Elite?” Saclolo asked. “Is this your membership?”

The man shook his head. “No. There are almost twenty more. They are making their farewells to their families. They will be of no trouble to you either as they intend to end their own lives tonight rather than face colony justice.”

With a broad and somewhat sinister smile, Saclolo made a motion and his men closed in on the Elite binding their hands behind them and placing gags in each of their mouths. Saclolo told their spokesman, “They needn’t have bothered. The colony shall not pass judgement nor shall they punish. You will all be returned to the Earth and to the various villages where you once lived. From where you stole the lives

of people who once trusted you. There, tribal justice shall prevail. May any deities you worship have mercy on your souls!”

* * *

Along with the conveyor system installed during the previous week, Tom brought up a pumping station and flexible piping that now spanned from the intake at the bottom of the reservoir all the way outside and to the base of the elevator.

It was a complex and powerful impeller-based system that had the power to suction water from the holding cavern out to the elevator and from there push it nearly two-thirds of the way up. A similar system was located at that point of the pipe. It would do the rest.

He motioned to Harlan.

“It’s all yours, Director. Go ahead and send things up to the *Sutter*.”

Harlan shook his head. “No. Come over here, Saclolo and Magadia. It should be you who start the process of saving the planet that gave you life.”

Of the two, Saclolo had been in a suit and outside several times where his wife had never set foot outside once brought to the colony.

She was clutching his hand so tightly that the entire right sleeve of his suit was pulled taut.

They stepped forward.

“Are you certain of this, Señor Harlan?” he asked. When Ames nodded and stepped away from the panel at the base of the elevator pipe, the two Filipinos took tentative steps forward. But tSeñorhey stopped a few feet shy of their target. Saclolo looked into the visor and eyes of his wife. She nodded a silent agreement.

“No, Señor Harlan. It should be the three of us, or just you, but not only us. Please?”

Fighting back tears that threatened to blur his vision, Harlan Ames, former Chief of Security for Swift Enterprises and current Director of the colony, stepped forward.

Together they pressed the area on the monitor marked **START**.

The equipment whirred into action sending vibrations into the ground they all felt in their feet.

* * *

With its load of more than a million gallons of water, the *Sutter* slowly and carefully docked with the upper end of the pipe hanging in space over a nearly dry reservoir in the hills to the east of Bakersfield, near the town of Lebec.

At an ending height of more than ten miles it was highly unlikely that the water would just drop into the former lake, and that was a good thing. From that height it would do incalculable damage to the lake bed. Better it spread out in the upper atmosphere to rain down over a much larger area above the lake and from there drain down.

Tom and Bud had hitched a ride in the *Sutter* allowing her skipper, Art Wiltessa—another multi-talented Enterprises employee who was an engineer as well as part-time pilot—to handle all the maneuvers.

With an expertise born of being the man with the most hours piloting the giant golden ship, Art had them parked within ten feet of the docking point, and holding steady. With an ease that belied his high concentration, he used small nitrogen jets on the opposite side to approach the dock. With nearly no shudder at all, the ship and hundred-mile-long pipe connected and latched onto each other.

Knowing that the icy vacuum of space could cause the water nearest the hull to freeze, and understanding that it might also do the same once it entered the pipe, a special heating unit had been mounted inside the ship just before the pump.

It now was working to heat all the water coming through to at least forty degrees, the minimum Tom's calculations showed was necessary to avoid freeze up before it got into the lower, warmer atmosphere.

Tom's heart was pounding. He had just glanced at his watch only to find that the time window where they were allowed to start the download was nearly over. He had five minutes to get things going or they would run out of time.

"Here we go!" he declared stabbing a finger onto the monitor harder than he intended. As he nursed the finger, he also watched the readouts.

The water was pumping out of the hull and into the pipe

at a rate of more than ten-thousand gallons per minute. At that rate it would take almost one-and-a-half hours to get everything out.

“I just hope that the deadline was for the *start* of the pumping,” he said out of the side of his mouth at Bud.

The flyer said nothing. His eyes were on the view provided by the cameras at the bottom of the pipe.

The first water came out of the lower end twenty-two minutes later. It gushed out, but Bud let out a cry as he saw what happened to it.

“Tom! It’s turning into snow!”

Tom’s response wasn’t what he expected. In fact, it shocked the flyer.

Tom Swift was laughing.

“Don’t you see, Bud? That’s a really good thing. It means that our warm water is combining with the sub-zero moisture in the upper atmosphere and turning into that glorious white stuff. And that,” he said pointing at the monitor, “means there will be more water hitting the ground, and slower so it won’t do any damage.

“So, we did it?” Bud asked, perplexed.

Tom slapped him on the shoulder and giggled. “We did, indeed, Bud. We did, indeed!”

* * *

On the ground below, a State worker—sent out to make certain that if any water reached the ground that it was diverted into anywhere useable—glanced up as the first drops of water hit the top of his head. Looking at the five others with him he said in a low and awed voice:

“It’s raining, men. I’ll be damned. That Tom Swift did it! It’s actually raining real and delicious—” he turned his face skyward and opened his mouth, “—yep. Wonderful, delicious rain. Hallelujah!”

* * *

Tom and Bud, along with their wives, Bud’s family, and Mr. and Mrs. Swift stood on the raised dais close to the Governor of California. Several other dignitaries—both state and federal—had already given brief speeches to the gathering of more than a thousand invited guests and the

world's media.

At Damon Swift's insistence, there were five missing news companies. Four were California-based network affiliates and the final one was the second largest network in the country.

All had, in Damon's opinion, spread unnecessary panic amongst their viewers by constantly stirring up fears that had no basis in reality or that were downright anti-Swift. Despite his attempts to get them to at least listen to the facts, all had refused, evidently preferring to make things up rather than report truths.

So, they had been specifically told that they would be turned away and not to come.

All had and all were now broadcasting about how they were being shut out of the event because of petty feelings within the Swift organization.

It really didn't matter. Their viewers had already turned over to the competition so they could watch the speakers and hear the news.

The Governor was just finishing his four-minute address with, "So, the problem we ourselves brought onto our own heads is far from over, but due to the incredible efforts by the Swifts, especially Tom here, and under my leadership, California has been given a second chance at life. I promise you that we will not squander it, Tom. I'll see to it!"

He motioned the inventor forward and relinquished the array of nearly fifty microphones.

As Tom came forward he couldn't help but think, *Typical politician. He was one of the worst howlers over forcing us into an almost impossible schedule, and here he is taking credit!* But, he put on a smile and stepped to the podium.

"Well, first thanks to Governor Adams for his kind words. I also want to thank the majority of the media who did not try to turn this into a whirlwind of panic and finger pointing. Especially where it came to our company. There are so many wonderful things available to mankind both here on our little, blue planet, but also from the very space that surrounds us. In this case we were able to bring life-sustaining water from the comet now in orbit around our Moon.

"That," he added with a small grin, "makes our Moon a

very special one indeed. A moon with a moon orbiting it is a rare and unique thing. But, it is one that I will admit is not natural and so I promise to keep a constant eye on things. If there is any indication—and by that I mean *provable* and not just feared or rumored—that it is negatively affecting our planet, I shall remove it and send it back on it's original path.

“I hope that will never be necessary. There are too many places on our planet where that water might be put to good use.”

He ended a minute later with the statement, “I hope we have learned a lesson from this, but I fear it will soon be forgotten. Thank you.”

As the press clamored to get questions in, the Governor's Press Secretary stepped to the microphone to instill some degree of order.

As he did, Tom stepped back to stand between Bud and Bashalli. She received a kiss and Bud a clap on the shoulder.

“So, flyboy, what do you think?”

“What I think is that your last words will become a part of history and forgotten in an instant. But, I'm right beside you. If we have to go through all this again, count on me!”

Bashalli leaned over and stood on her tip toes. “Tom? Does this mean I get to have you home for some time?”

“Gosh, Bash, I hope so. Why do you ask?”

She whispered something in his ear that made the young inventor, and recent husband, blush furiously. But, he nodded to her.

But, his hopes of remaining by her side would only hold true for about a month before he was dragged into a new adventure that would see him back on the Moon, facing a personal danger that would threaten to end his career... and his life!

<•>—<>—<•>

Epilog

Seven months passed and the water projects for the Moon and the once more thriving state of California were completed. The comet was becoming unstable and as he had once promised Harlan and the residents of the colony, now renamed as Cordillera II, Tom returned to take the remaining comet out of orbit and to return it to its rightful path through and out of the solar system.

Over time it had softened to the point of becoming mushy. It was time to move it on.

Five days later, it had been accomplished with the *Challenger* and a veritable flotilla of Attractatron mules taking the comet to the point it would have naturally arrived by this time—on a path back out of the solar system—got it up to speed and with a final small push, sent it on its way.

It would not be back inside the solar system for twenty-three years.

A celebration was held in the colony attended by everyone. And, with so many people it had to be split into five separate locations. Harlan, Tom, Bud and the girls went from location to location putting in appearances and accepting the applause and cheers of the grateful colonists.

The following morning, Tom watched the main airlock indicator cycle through its opening sequence. He was in the tower control room looking down at the lunar surface. It only took a few seconds for the two space-suited men with their burden to come into view.

Harlan and Doc were carrying Maggie's body bag outside along with two shovels. Tom knew that he should have been out there with them, but he couldn't.

Maggie was dead, and he was alive. Harlan had made his choice, and now he had to live with it. Somehow Tom knew that Harlan would survive and be the father his twin babies needed. And, that they would only know of good things about their mother.

Tom, on the other hand, had to live with the good and the bad. Surely there must have been something that he could have done to save her, but what? Maggie was doomed from the start. It was doubtful that she would have lived long enough to see her babies born naturally.

Maybe, just maybe, Maggie knew this and did not want her evil-self to be part of their birth. Afraid that somehow she would pass on her evil.

Tom heard the last four words she said before she scrambled her frontal lobe with the vibrator gun. He knew that Maggie was in control of the body and that she didn't have to take that way out. That she could have dropped the gun and walked back into Harlan's arms.

She chose not too.

Tom was glad that he was an inventor—machines he could understand, but people? Never.

Outside and without any words the two men dug a grave by the wall of the crater in an out of the way spot that had never been walked on before. They placed her in it and covered the body, slightly mounding the lunar soil over her. A small aluminum plaque Harlan had made that morning was placed on top, stating:

Mrs. Margaret Masterson Ames,
mother and beloved wife.
May she finally find peace.

Doc left Harlan's side and returned to the dome. He knew that even in grief, his friend would do nothing foolish.

Ames sank to the ground beside the grave. His hand trailed over the dusty regolith leaving a little pattern, one he knew would last a millennia. The patterns formed one word. A word that Maggie would never hear. So it was fitting that it was writing above her in a world where silence reigned. "Mommy"

"I don't understand why you did any of the things you did, Maggie, and far too many of them were evil, but I'm going to miss the absolute hell out of you," he whispered.

Then, standing up and looking skyward, Harlan Ames did the only thing you might do when grieving on the lunar surface.

He opened his mouth and began to howl at the Earth.

Coming Soon... If I can convince Leo,

You Only Live Thrice

With two of these books under our collective belts, can a third one be far off?

Well, that depends on alignment of the planets, stars, and a few mythical astrological symbols. It is possible that we haven't finished exploring this offshoot world of Tom Swift. There might be a lot more to tell. A trilogy?

Then again, this might be it for the combined effort books.

We'll see.

I'd say, "Watch this space" but that would be silly! All you would ever see is this text.

So, keep a lookout on Amazon for more books by the Levesque / Hudson team.

Tom and Leo also keep stores for their works at Lulu where you can find quality hardbound editions of this book and it predecessor:



Tom Hudson's Bookstore

[www.lulu.com/spotlight/
tedwardfoxatyahoodotcom](http://www.lulu.com/spotlight/tedwardfoxatyahoodotcom)



Leo Levesque's Bookstore

www.lulu.com/spotlight/savagelion51

Why are you looking at this page?

Other than these words, it's blank.

Now, close the book and find something else to read!