

TOM SWIFT
And His
EnvirOzone Revivicator

BY
Victor Appleton II

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THE NEW TOM SWIFT INVENTION SERIES

Tom Swift And His Envirozone Revivicator

By Victor Appleton II

Swift Enterprises is called to a G-20 nations meeting on the environment to defend their efforts in negating their carbon footprint. Their flights to their Outpost in space have been deemed to be responsible for too high levels of pollution. The ozone layer is deteriorating and Tom must find a way to mitigate the problems or face possible international sanctions.

As they depart the meeting, an emissary from a tiny African nation pleads with Tom to save his country from the deadliest drought in its 72-year history. Tom want to help but he must also struggle against governmental interference coming from a senior senator with a grudge against Tom and his father.

Can Tom pull off a double-play? Is there time to save the African nation while finding a way to stop global warming and save Swift Enterprises? If not, not only will Swift Enterprises be required to pay crippling environmental penalties, but more than four thousand innocent people will most probably die.

To make matters worse a formation of unmarked aircraft seem to appear wherever Tom goes. Who are they and what do they plan to do?

This book is dedicated to Edward Stratemeyer and the original V.A. who started the whole thing way back when... to all the little V.A. IIs, and to Scott D for getting me re-interested in Tom.

If you look at the world around you, you are sure to see signs that many things that Tom and his forbearers created over the years are almost commonplace in our lives today. Like the TASER, named for **Thomas A Swift's Electric Rifle** {look it up!}

Only time will truly tell how prophetic his exploits will turn out to be.



Within seconds, missile exhaust trails went streaking from the U.S. jets toward their adversary. **PAGE 177**

TABLE OF CONTENTS

CHAPTER		PAGE
1	A Request - A Threat?	9
2	Plea From a Stranger	19
3	Hope #1	33
4	Dangerous Enemies	41
5	Enemy Above...	51
6	...Enemy Below	59
7	“Terrorists in Our Midst”	67
8	Water, Water Everywhere	77
9	Hope #2	85
10	Promised Help	93
11	A Difficult Decision	103
12	Invasion!	109
13	Surprse Ally—Surprise Enemy	119
14	Jungle Death	131
15	Missing: T. Swift	139
16	Government Interference	151
17	Un In The Air	159
18	Every Cloud Has One	167
19	Home In Shame	177
20	Victory Snatched From Defeat	185

AUTHOR'S NOTE:

In late summer 2009 I pulled out my old Tom Swift Jr. books, intending to do my every-8-years-or-so re-read of the entire series. After reading the first, *Tom Swift and His Flying Lab*, I knew something terrible had occurred. I had grown, science had caught up with and surpassed Tom, and the book just didn't hold up.

I force my way through the next five books before giving up. There was a sense of loss that I couldn't shake for weeks. Then...

Then I discovered that another author, about my age (also the wrong side of 50) had set about updating the series. On his own. I later found this to be because the publisher holding the rights were bound and determined to do nothing, but to allow nobody else to revitalize the world of Tom. In fact, with the fifth and final series they seemed intent on killing off Tom for good.

He and I communicated for a month before he suggested that I, a writer and once-published author give it a try. I did, and this novel is the result. Part the desperate need to give Tom more modern problems to tackle and part story from a dream I had years ago, It flowed out of my fingers and into my Macintosh.

It was a deeply satisfying experience and one that I have set about to duplicate in my second book of this new, fan fiction series, about a slightly different, modernized and more humanized Tom Swift.

Quality paperbound copies of all of this author's works may be found at the following web address:

<http://www.lulu.com/spotlight/tedwardfoxatyahoodotcom>



Tom Swift and His EnvirOzone Revivicator

FOREWORD

Tom Swift and I grew up together. We were both children of the 1950's. He became a world-renown scientist and inventor, and I became a journalist. No... not a reporter. I am someone who journalized the exploits of others. Like my father before me and my maternal grandfather, Dr. John Watson.

Tom and Bud had many adventures together and we were all very close for a long time. And then, I grew up. I figured that his adventures were over and placed Tom on a shelf—just sort of abandoned him there.

My bad!

I recently happened upon the works of a wonderful writer named Scott. Imagine my surprise and pleasure when I discovered that he had taken Tom and Bud and then re-imagined their exploits.

Then, image my greater surprise that he had taken a carefully crafted 'universe' of situations and characters, both true and not, and replaced some of it with more truth, more reality and more spirit than Tom ever had.

His Tom Swift Lives series of stories goes beyond anything ever chronicled; he has even added new stories and adventures to the ethos, and it continues to flourish.

That gave me the idea that I should pick up the old word processor and write. I am smart enough to realize that I can't resurrect the old Tom. Time and reality have passed him by.

I fully admit that I have taken Scott's newer, more realistic world of Tom Swift and embraced it as the true world. So, what have I added to it? Perhaps a little more boy-turning-into-man emotion, perhaps a little more realization of his own self—good and bad—and definitely an increase in pages.

These adventures fit side-by-side with the Tom Swift Lives books. These are the stories of Tom, Bud and the rest that occur in between the TSL stories. They just barely slipped through the cracks or Scott would have already told them. Enjoy!

Victor Appleton II

CHAPTER 1 /

A REQUEST - A THREAT?

“SO, WHAT the heck has been going on here,” exclaimed the muscular, dark-haired youth as he strode into Tom Swift’s private lab.

Turning suddenly at the startling question, a broad grin split Tom’s face. “Bud! Wow, it’s great to see you back. How were California and your folks?”

Bud Barclay, Tom’s closest friend and confidant, had just returned from a visit to his parents living in the San Francisco Bay Area. When Bud’s father had been transferred there several years earlier, Tom’s father, Damon Swift, and his mother had agreed to keep an eye on the youth so that he could finish his high school years at Shopton High where both youths were popular and respected. Bud was now a valued Swift Enterprises employee.

“Well... Mom is great, but Dad is overworking himself. I think he just can’t delegate the most important aspects of his job to people who work for him; the ones with all of the necessary skills... kinda like you, professor!” Bud added with a twinkle in his eye. “My original question still stands. What the heck is going on? I haven’t heard head or tails from you in the past couple weeks, and I’m feeling kind of out of touch.”

Sitting back onto his work stool, Tom tilted his head and looking serious replied, “Hmm? Probably more than you want to hear about in one sitting. But at the top of the list has to be our replacement spoke for the Space Wheel.”

Many months before, Tom had designed and overseen the construction of a giant Outpost in space, orbiting the Earth at the geosynchronous altitude of 22,300 miles. This space station allowed both Swift Enterprises to have a stable platform in which to manufacture their popular solar batteries—and where dozens of experiments were held in the almost-zero G environment of the station—and facilities for scientists and industrialists from more than nine different nations to carry on work ranging from Ultra-HD television and radio transmissions to medical experiments to development of new foods.

“Sure,” Bud stated, “I knew that you were planning to update Spoke Nine, the one where they track weather patterns and shipping. What’s this about ‘replacing?’”

“We took a look at what it would take to strip out more than seventy percent of the stuff in that spoke, transfer it back down here, send up the new stuff and try to do all of the installation in zero G, and it just kept coming up as a practical improbability. Not to mention a schedule that would have had everything from that spoke being out of service for more than a month.”

“Yeah, I see how that might not go down too well with the people who are paying to use that spoke.”

Tom nodded. “Dad and I figured that we could outfit an entirely new rocket with everything in less than a week with direct help from the companies involved, get it up there, installed, and the old spoke pulled out to a holding orbit. And at about sixty percent the overall cost to Swift Enterprises!”

Bud whistled. “So, it’s all done?” he asked.

“Done. And we only had one piece of equipment that came loose during take-off and was damaged. Luckily, it was a model-for-model replacement of something already up there. We just pulled the old one out of the de-commed spoke and slapped it into the new one.”

“Alright. What happens to the old spoke?”

“Over the next few months the station crew will go out and start taking it apart, at least into manageable chunks that can be ferried back down in our regular supply rockets.”

Bud suggested, “You mean up with the new stuff, down comes the old?”

“That’s it, exactly!” Tom exclaimed. “Ten points with a follow-up question...”

“Shoot.”

“Why won’t we just leave it up there in case we need other spare parts?” Tom inquired.

“Well, I know that there is enough space junk up there and we probably don’t want to add to it. Is that it?”

“Yes and no,” said Tom. “You know that anything with mass generates micro-gravity, right?” Bud nodded. “So, if we leave a fourteen-foot wide, sixty-four-foot long hunk of old rocket up there, parked within useful distance to the station, microgravity would almost immediately begin to pull the two together.”

“Could that drag the space wheel out of its orbit?” Bud wanted to know.

“Only slightly. With about fifteen times the mass, the Outpost

would pretty much stay in one place—perhaps move a foot or two—but the old spoke would start to get closer and closer, until...”

Bud’s eyes widened. “Jetz! That would mean an eventual collision!”

“Sure, but very, very slowly. Even at that, it could cause problems, So, the best thing is to just bring it back down.”

“Why not de-orbit it and let it burn up, just like they did with MIR and SkyLab?”

Shaking his head, Tom replied, “Not the right thing to do. Mankind has already messed up the air and water over the years. Anything that large is going to have a negative impact. Dad calculated that the 28-ton spoke would release almost 25 metric tons of carbon and other harmful chemicals and elements.

“Ouch!” said Bud. “Just color me kinda stupid, OK?”

Tom was about to reply when the intercom on his desk lit up. Pressing the ‘receive’ button, he asked, “What can I do for you, Munford?” Tom asked his secretary and personal assistant.

“His Excellency, Herr *Doktor* Wolfram of NATO wishes to speak with your father, but he is in transit out to the Citadel right now and has asked for complete privacy. The *Doktor* will speak with you as a substitute. Sorry.”

“It’s no problem. Doktor Wolfram and I have met many times at various events and governmental meetings. Please put him through.”

Following a series of barely-noticeable clicks, indicating to Tom that both the scrambling and tracing circuitry had been engaged, a deep, booming voice with a slight German accent said, “Are you there yet, young Mr. Swift?”

“Herr Doktor. How nice to hear from you,” Tom replied. “I apologize for my father’s unavailability right now. To what do I owe the honor?”

“Tom...” began the caller, “in light of the high esteem both I and the rest of the scientific world—well, at least in the free world—hold you and your father, I must give you a, I believe it is called, a heads up notice.”

Beginning to worry, Tom said, “That sounds serious. May I ask about the nature of the heads up?”

“NATO is working with the G-20 countries on both pressing economic issues as well as environmental issues. This involves the

latter. For far too long have developing nations been lagging behind in keeping their industries clean. Even the illustrious United States—acknowledged leader in the world—can be faulted for both intentional and unintended environmental disasters.”

“Certainly, there are problems around the world. And, I won’t claim that the U.S. is squeaky clean, but overall we try to do what’s right. So, what can Swift Enterprises do for the G-20?”

The Doktor continued, “Global warming has been an issue for more than two centuries. First, and pertaining to large cities such as London, and later Mexico City and Beijing, individual governments have mandated changes. Some have helped, some have failed as with Beijing, but global temperatures have continued to grow, only at a slightly slower pace.”

“Are you asking us to find a solution?”

“Not directly. I am calling to inform you that a Penelope Clothier-Warner of the G-20 Executive Committee will be in touch with you with a—how to put this properly—it is more than an invitation. It will be more like an order to appear. You, your father and your Swift Enterprises legal team are being summoned to appear before the G-20 Environment Committee!”

Dumbfounded, Tom asked, “Whatever for? Are we going to be treated as invited guests, or as indicted criminals?”

“Tom,” Doktor Wolfram tried to soothe the youth. “I may have misstated the situation. The committee wants you to appear as guests, and you will certainly be asked to provide insight and assistance where possible. They are interested in Swift Enterprises both because of your record for beneficial projects, products and programs.”

“We try to be both good citizens as well as providing the world with what is needed,” Tom began, “and we will certainly be at the committee meeting if possible...”

“Please explain!” demanded the Doktor. “What do you mean by ‘if possible?’ “

“I simply mean that my father is deeply involved in a series of top secret government projects right now. One of them is the reason you are speaking with me and not him today. What I really mean is that having all of us in one room depends on when this meeting is scheduled and how flexible the committee is.”

“Ah,” replied the Doktor. “I now see your meaning. Well, I have no direct knowledge of the date and time for the meeting, but I do

know that Ms. Clothiet-Warner will be calling you at 10:00 a.m. GMT tomorrow.”

“Hmm. That’s minus four here or 6:00 a.m. Is she calling the main Enterprises’ number or would you be able to relay my private number to her in time?”

“Under normal circumstances I would be pleased to act as intermediary, but this call is strictly off-the-record, please. As I stated, I do this out of respect for you and your father, but definitely not at the request, or with the knowledge of, the committee.”

“I fully understand, Herr Doktor. And, thank you!”

“A pleasure to be of some assistance. On an official note I must pass along thanks from the representatives of Rhinehart Industries. They are extremely pleased with the new facilities at your space Outpost. In the relatively short time the station has been in orbit, their equipment had become almost worse than outdated. It had begun positively hindering their weather research. The new accommodations up there came just in time.”

Tom grinned to himself. He had fielded more than a dozen calls from the various entities who called that part of the Swift’s space station ‘home.’ Everyone was pleased.

“I appreciate the thanks, sir. Please let their people know that we stand by to assist them in the future.”

The conversation concluded moments later. Tom turned to ask Bud a question only to discover that his friend had slipped out of the room during the phone call. Tom activated his TeleVoc and paged the husky athlete and copilot on many of Tom’s missions.

“Hey, Buddy boy? You there?”

“Sure, skipper. I just hopped out or a minute to grab a bite to eat. What’s up?” The TeleVoc pin did not require the sender or receiver to talk aloud; it picked up on jaw and muscle movements at the sender’s end and sent minute vibrations into the receiver’s inner ear bones that sounded exactly like the voice of the sender.

“I just wanted to ask you if you could take a rain check on dinner tonight? I know Sandy is going to be disappointed, but it looks like I am going to have to cram for an early-morning phone call and may just sleep here at Enterprises.”

Bud paused, then replied, “Maybe I’ll take Sandy out for a burger or something. Wouldn’t want the poor girl to starve.”

After giving his ‘blessing,’ Tom signed off and reached for the intercom. “Munford... are you there?” he asked.

“Where else would I be at this time of day,” came the reply. “And, I really, truly wish you would call me...”

“Trent. Sorry, Trent,” Tom finished the man’s statement. “Say, it’s 12:40 and that’s part of the lunch hour... or don’t you eat?” he teased, knowing full well that the secretary took great pride in both the quality of his home-cooked self-packed meals, as well as being available at all times during normal business hours.

“*Mister Swift,*” came the curt reply. “Please remember that I am here to serve you. If I were to stray from my desk for a leisurely hour or so every day, the whole of Swift Enterprises would fall to pieces. I am, you must know by now, indispensable.” There followed a brief pause during which Tom could have sworn that he heard a muffled laugh. “And now, what might I assist you with, young sir?”

“That last call was about a G-20 nations’ meeting that Dad and I are practically going to be ordered to attend. Is he reachable right now? If not, can you get word to the Citadel that I really need him to call in upon arrival?”

“I can get him right now if you want. He only said to block calls from other people, not you or your mother. Give me about a minute and I should have him on the line.”

While waiting, Tom began pondering what sort of solutions he might be able to offer to the global warming issue should they be pressed for answers.

“Dad,” he said when the elder Swift came on the line, “I’m not quite sure how to interpret all this, but I just had a call—perhaps a warning—from Doktor Wolfram at NATO. He told me that we are about to be summoned to a G-20 Environment Committee meeting.”

“Sounds like an invitation...” Damon Swift began.

“I don’t know, Dad. He made it sound like it is going to be something pretty serious. They are trying to tackle global warming, but it doesn’t sound like one of those ‘and what can you geniuses think of that will save the world’ sort of meetings.”

“Well, did he come right out and say that, or could it be a problem with his English?”

“I just don’t know, Dad. All I really know is that he says he wasn’t authorized to call us about it... it was more of a heads up. Oh, that and the call is coming in at 6:00 am tomorrow morning. The official call, that is.”

“Egads! That’s 4:00 am at the Citadel. If you think it will help, I’ll

turn around and come back to answer that call. I can always head back tomorrow after the call and not cause too many problems with the schedule.”

“Dad. Normally I would just try to handle this myself, but with the conflicting messages I think I was getting earlier, I could rely use your help. But, you could be part of a three-way call from the Citadel, couldn’t you?”

“I could... but I have a feeling that it will be best for you and me to be in the same room when fielding that call. Hold on, just a minute...”

Tom could hear his father talking to Hank Sterling who was piloting the high-speed aircraft. Finally, he came back with, “OK. That’s settled. Hank is turning us around right now. We’ll be back at Enterprises in about three hours. I’ll come over to our office immediately upon arrival and we can go over the recording of that call.”

“Thanks, Dad. Sorry to gum up your plans. I know how important your projects out there are.”

“See you soon, Son,” the elder Swift signed off.

Later that afternoon Tom was sitting at his CAD station stretching a 3-D model of a large, puffy ring when his father strode into the room.

“Hi, Dad. I’ve just been doodling, waiting for you.”

“So, let’s listen to that recording.” Both Swifts walked over to the desk normally occupied by Damon and signed onto his computer. Bringing up the call log for the day, he quickly found the file he wanted and activated it. From the surround-sound speakers came the entire call.

From time to time, he looked at the younger Swift, trying to judge Tom’s impressions now that he could listen to it as a 3rd-party.

At the end of the call, both men looked meaningfully at each other.

“That,” Tom’s father said, “is a definite warning. But, about what?”

“Listening to that call makes me more confused about his intention. And the intent of the committee,” said Tom. He bit his lower lip. “Am I making more out of this than I should?”

“Absolutely not,” his father replied. “This committee is known for riding roughshod on people and companies coming before them,

both friends as well as foes. We will, of course, try to get some indication of their purpose for ‘inviting’ us during the morning call, but we may have to play the entire thing by ear.”

“What about the ‘bring your legal eagles’ stuff?”

“I’m pretty sure that is just a matter of form for the committee.”

The two talked for a few minutes before Damon Swift excused himself to go talk to the Citadel regarding his revised schedule, returning after Tom had left the office.

Following an early meal that evening, Tom and his father both went to bed to try to get a reasonable night’s sleep. Tom was less successful than his father who had been through dozens of incidents in the past that had begun on a similar ominous note.

They arose early enough to grab a bite to eat that Tom’s mother had left for them, and then drove to Swift Enterprises to receive the phone call. Walking into the foyer of their shared office both were surprised to see Munford Trent sitting at his desk, waiting with two steaming cups of coffee.

“Munford,” Tom said. “You are right. Enterprises would fall apart without you!”

Although annoyed at the lack of formality in using his given name, Trent allowed a slight smile to play around the corners of his mouth as he handed each Swift his coffee. “I have already talked to the communications board and the call will be routed directly to the phone on Mr. Swift, Senior’s desk. They have all normal security measures in place so there will be no bothersome delay for your caller.”

“You’re a gem, Mun...” Mr. Swift started, “I mean, Trent.”

At precisely 3:59 a.m. the phone rang, and Tom quickly pressed the answer button, placing the phone into speaker mode.

“Good morning. This is Damon Swift. With whom do I have the pleasure of speaking?”

A slightly nasally female voice came through the speaker after a slight pause, “This is Penelope Clothiet-Warner, Executive Co-Chair of the G-20 Nations Environment Committee. Good morning to you, Mr. Swift,” came the reply. “I have no doubt that any one of several individuals here in Germany may have tipped you the nod regarding the substance of this call.”

“Actually, we did receive a call telling us of the call’s timing, but nothing of its substance.”

“Well, this isn’t a social call as you might imagine. We—the committee, that is—are deep into discussions regarding the environment. I, myself, have just stepped out to make this call. We are most distressed to note that after years of progress the environment, especially as it effects global warming, have begun showing less and less effectiveness. To be frank, we must have Swift Enterprises, along with more than a dozen other international concerns working on this.”

“Of course, we will be pleased to lend our expertise to the committee, and can be counted upon to work to develop greater measures to overcome the problems.”

“Quite. Our schedule calls for us to meet with you at our Munich offices tomorrow at 1330 GMT. Please arrive at least one hour early at which time you will be briefed as to procedures. Tardiness will not be tolerated. Good day to you!”

With that, the line went dead.

CHAPTER 2 /

PLEA FROM A STRANGER

“WELL!” exclaimed both Swifts in unison. Looking at each other, they couldn’t help but laughing at the absurdity.

“Bring up the details of the call and let’s make sure it actually came from Germany, and from the offices of the G-20 committee,” requested Mr. Swift.

Tom quickly complied. “Looks as if it was legitimate, Dad. It traces back as trans-Atlantic coming through our space wheel’s transponders. From that point it goes to the main Munich exchange and to the NATO office building. Should I call the number back to verify?”

“Let’s wait five minutes and then do that. Just to see who answers and then break the connection.”

A few minutes later, Tom initiated a call back. Within two rings it was answered by a young-sounding German woman, “Offices of The Environment, NATO Munich. May I assist you?”

Tom shut the call off and looked at his father. “Guess it’s for real. That means we have to be at their offices in just under twenty-seven hours. What’s that going to do to your schedule and your projects?”

“Let me make a few calls. I am almost certain that Doctor Albertson out there can carry on for another day or two. He has been fairly self-sufficient to this point.”

Tom excused himself and walked outside of the office building. He needed to think, and fresh air always seemed to help. While he walked, he muttered to himself, “Everyone knows that the ozone layer has been damaged and that there is far too much carbon dioxide in the air. But, they’re not related... not really. There have been suggestions for reducing both, ranging from a giant Earth-covering parasol to spraying huge amounts of ozone into the atmosphere.

“None of them are practical or even particularly effective—at least not on paper. So what? What’s the answer?” He stopped, listening to the pre-dawn quiet. He soon noticed that the quiet was being disturbed.

In the distance, a booming, foghorn of a voice was singing,

O bury me not on the lone prair-eeeeeeee
Where the wild coyote will howl o’er me
Where the buffalo roams the prairie sea
O bury me not on the lone prair-eeeeeeee

Waddling along, arms full of shopping bags Tom saw Chow Winkler coming toward him. Chow, a former ranch-hand cook had met the younger Swift when he and his father had been in New Mexico during the planning phase for the second reactor at the Citadel, and he had taken so strongly to the young inventor that he pulled up stakes and accompanied Tom back to Shopton to work for Swift Enterprises. Since then, he had become an invaluable member of many of Tom's expeditions—even into space—where he acted as personal chef to Tom and his crew mates.

“Chow! You old pan wrangler, you!” Tom exclaimed. “You're a sight for sore eyes...” Tom paused, eyeing Chow's latest shirt. Chow had an admitted weakness for gaudy western shirts. This one was almost neon purple with a series of prairie dogs cavorting around bright green cacti.

“Actually, you make *for* sore eyes! That shirt, Chow! Ouch!!”

Feigning hurt feelings, Chow scuffed his toe in the tarmac. “Ah, shucks, Tom. It's just a little thing I picked up on my latest trip out to Texas. I thought it was right purty, too,” he added.

“Oh, don't let me give you any guff, Chow. If it weren't for you, we'd never have any emergency lighting!”

“Hah! Your soundin' just like ole Buddy boy...” Chow and Tom turned suddenly at the sound of a quickly approaching vehicle.

It screeched to a halt and someone jumped out of the driver's seat brandishing a portable fire extinguisher.

“Quick, Tom! Get back! Somebody's set off a signal flare in front of you!”

“Har-de-har, Buddy boy,” said Chow as the young man placed the device on the ground and stepped forward with open arms. “You jest wait. One 'o these days somebody will get their own back at ya,” Chow declared setting his bags on the ground and then wrapped the young flyer in a bear hug.

“Say, Chow. What are you doing here at this hour?” asked Tom. Tom knew that the older man had recently moved into a small apartment about three miles from Enterprises and, having no car, either rode one of the Enterprise scooters—not a possibility given the number of bags the cook had been carrying—or took public transportation, but that didn't begin running until 7:00 a.m. in Shopton.

“Wahl,” drawled the somewhat pudgy cook, “I bought me some great vittles on my visit to Texas last month, and my pal, Doug

Parkins, had them all shipped out here on dry ice. Only thing is, the silly ole cuss shipped them to my little bung-a-loo instead of to Enterprises. I've had 'em in my freezer, but the ee-lec-tricity went out sometime around 3:00. I called Charlie Lane out at the Rancho Restaurant and Lounge—see, he stays at work until around 5:00 a.m. every day—and he said he didn't have no room in his freezer, but he'd take off and fetch me and this food and drop us off here. Couldn't get the guard to let both of us in 'cause Charlie cain't pass muster in a legal check. Had a bit of a fracas a year or so ago, and now the danged computer keeps spitting out that he's no good."

Tom sympathized with the cook's plight, but security at Enterprises had been breached several time in the recent past, and scrutiny had been tightened on everyone. Tom reminded himself that he had promised Harlan Ames, Enterprises chief of Security, that he would work on an improved system.

"Let Bud and me help you to your galley, old timer," Tom offered.

Gratefully, Chow let the boys pick up the two heaviest bags. They started back across the tarmac.

"What have you got in here?" Bud inquired.

"Never you just mind, mister Buddy nosey Barclay," Chow retorted. "I'm a havin' my doubts that you deserve some of the great stuff that old Chow whips up for you boys. Next thing you know, you'll be turnin' up you nose at my special road-kill stew!"

Bud held the bag as far out in front as he could the rest of the way to the main building. As he and Tom walked back out into the early morning light, Tom inquired, "So, why are you here so early?"

"Well... it was hard getting to sleep what with your ominous phone call coming. That plus Sandy wanted to try out a new place Bashalli suggested for dinner last night."

Bashalli Prandit was the beautiful Pakistani girl Tom had met months before while building his Flying Lab. She, along with Tom's sister, Sandy, had been both a willing and unwilling participant in several of Tom and Bud's adventures lately, and Tom was developing strong feelings for her.

"Bash has steered us to a couple of great places, Bud. What gives with this one?"

"It wasn't Pakistani or Indian or any of those cuisines. It was Thai. And, hot doesn't even come close to describing it. Did you know they have a sauce made from fermented fish heads and peppers?"

Tom laughed, knowing that the legend of the ingredients that particular Thai sauce was a little exaggerated but the heat factor was not. “You *did* only put a drop on your food, didn’t you?” he asked.

“Uh, not exactly. I thought it would be like taco sauce. You know... a little hot but you pour it on. Jetz! Was I ever wrong. It took three colas and a glass of milk to get me to where I could talk again. Sandy couldn’t talk either, but only because she was laughing so hard!”

“You’ve cooled down by now?” asked Tom.

“Yeah. But my stomach wouldn’t let me sleep, so here I am. How did it go?”

Tom told Bud all about the recent call. Bud whistled at the way the call ended.

“So, you and your Dad are going then?”

“Yes. We will get a few things done this morning and then probably take off around 8:00. We’ll arrive at about their 7:00 a.m., get cleaned up and over to the offices by a bit after noon. After that, who knows—”

Both boys headed their separate ways, Tom to his laboratory and Bud to the gym for a workout before he was scheduled for a mid-morning test flight of the latest version of Swift Construction Company’s *Pigeon Special*, the new *Racing Pigeon*.

Back in his lab, Tom tried to turn his mind to the anticipated problems that might be revealed at their meeting the following day. Around 8:00, Chow wheeled in a cart with hot oatmeal, scrambled eggs and a tofu-based sausage that Tom had taken a shine to when served by his friend, Bashalli.

“T’ain’t none o’ my biz-e-ness, Tom, but that hunk of fake sausage just doesn’t make any sense to me!”

“I know, Chow. But Bashalli got me eating them, and I have to tell you that they taste pretty good.” Seeing the hurt in the older cook’s eyes he added, “but they don’t hold a candle to your beef burgers and steaks. Just a little something different to start the day.”

Mollified, Chow wandered off back to his kitchen where he secretly had a plate with three of the sausages. Smacking his lips with pleasure he muttered to himself, “Jest don’t tell nobody ole Chow likes these things. Can you imagine the ribbing I’d take—”

Meanwhile, Tom walked over to one of the overstuffed leather chairs that made up the three-seat conference area of his lab and sat down. Within minutes, the food and lack of a full night’s sleep took over and his head fell back into the cushion.

Two hours later his eyes opened and he sat bolt upright. In his dream he had seen three things very clearly. The first was a needed improvement to Enterprises' security system. The second was a possible mechanism for the environmental issues he was sure would be some answer to part of tomorrow's meeting.

But, it was the third that was foremost in his mind.

He made several phone calls to various department heads and asked for a meeting within the hour. As they filed in, one-by-one, Tom fended off any questions until everyone had arrived.

"OK, folks. I know you're wondering why I asked you here. I've had a bit of a vision and one that I think will solve a couple problems that may be coming our way soon."

"What's on the agenda, skipper?" asked Arvid Hanson, one of Enterprises top modeling engineers and the man responsible for personally turning out the superb models of all of Tom's inventions. This included the shining model Tom reached out and picked up from a shelf

"Arv... guys... you all were involved in the creation of the *Sky Queen*, and she is a wonderful plane. You almost couldn't ask for more. The only problem with her is that we have run into a few issues where new equipment, larger than can fit in through the hatches or in the hangar, has meant that we have had to breach her hull at least twice. And we've had to rely on our larger cargo jets at other times."

"Sure, Tom," replied Hank Sterling, engineer, pilot and one of Tom's go-to guys when it came to circuitry design and troubleshooting. "But, it's worked out OK, hasn't it?"

"Up to now it has, but I think we have something bigger than we have ever undertaken coming up; bigger than we know right now. That worries me. The *Queen* is a great ship. But what I have in mind is a *Sky Queen* Mark II."

Everyone looked at each other and then back at the young inventor. They all knew that Tom had proposed some pretty strange things in the past, but that just about every one had panned out.

Tom went on to describe a second version of the Flying Lab, one that featured a static nose/control module, a central power module for the jet lifters, and a module at the rear that would house the hangar deck and storage compartments as on the original.

What made this one different would be that an interchangeable module would sit in front of the center lifters with another one

directly behind it. These could be detached and changed out as needed; sometimes for cargo-carrying modules, other times for a medical module or specialized machine shop module. Practically anything could go into a module.

“So, skipper. How long are these new modules going to be? And do they have to be in place or can she fly without them?”

“Great question, Felix. I see the basic airframe being lengthened out by about one hundred twenty feet and made about eight feet wider. That way, we can build the module shells about 80 feet long, and the 28 feet width of the current *Queen* and the full three stories, And, still have room down the sides for sealed passageways. Of course, cargo modules might be totally hollow to allow for quite huge items. And, the basic airframe shell would always stay intact; we would just put the necessary modules into a loading pit, roll the *Queen II* over the top and raise them up in position.”

“And, if we had to leave one behind—say a hospital module—she would still fly OK?” asked one of the structural engineers.

“I’m pretty sure that it will all work. Each module compartment area would have a ‘floor’ that raises up when the module is put in place and then lowers back down to the bottom of the fuselage and seals in place when no module is there.”

“Isn’t she going to be a little heavy at both ends? Couldn’t she sag or break apart if we hit heavy turbulence,” asked Hank.

“I believe I have thought of that, plus I have a solution to our limited fuel issues that have plagued us a little in the past. All three static sections will be outfitted with Repelatron lifters. They will even be used as the main lifters; no more scorching-hot jets. We will have an area of about twelve thousand six hundred square feet on top for the photovoltaic cells, and if we feed all that into a series of the newer Swift solar super-cell batteries, we would generate better than fourteen thousand watts of power each hour. I figure the Repelatrons would eat up less than ten K of that, and that’s only when they are in use which is typically less than ten percent of any given flight!”

“And, the rest,” asked Bud who had stepped into the lab a few minutes before.

“Well, the basic aircraft will need about thirty-four hundred watts per hour, so even if she has to hover constantly, that’s just about thirteen point four of the fourteen thousand watts available. And, all the extra will go into keeping the batteries fully charged.”

“Sounds like quite an undertaking, Tom,” remarked Arv.

“It will be, but remember, we put the original *Sky Queen* together in under seven months. We can reuse many of the toolings for number two, so I estimate a five-month maximum build time. Even less if I can talk Dad into letting me take over one of the production lines at Swift Construction.”

The meeting broke up with all agreeing that the new *Sky Queen* Mark II would be a magnificent ship. Each department head promised to do an in-depth study over the coming several days to come up with time and cost estimates.

When Tom met with his father that afternoon he mentioned the possible project. The elder Swift was quite excited. “Tom,” he exclaimed, “you can’t imagine how glad I am to hear you talk about that. I’ve just spent the last hour talking to the State Department. They are looking for a fast and reliable method of responding to natural disasters both here and in foreign countries we support. Your *Sky Queen II* is almost precisely what we discussed.”

“Wow! That’s great, Dad.” Then, Tom went on to inquire about the extra facilities needed.

“Not only can we turn over a complete fabrication building to the project, the government has suggested that we take over the old Hurricane Tractor Company’s facility in Connecticut. We might set up several subcontractors there.”

As they left their shared office and headed for the underground hangar of the original *Sky Queen*, their transportation to their Munich meeting, they were joined by Chow.

“You fellers have got to eat on this trip, so I’m comin’ along. I already stocked the *Queen’s* galley with just the sorta foods you’ll both need to keep yer strength up for this meetin’ o’ yours.”

Neither Swift could think of any good reason Chow should not come along, so the three proceeded to the hangar. There, they were met by Hank Sterling and Slim Davis who would be their pilots on the lengthy trip.

Following an uneventful flight, a delicious breakfast prepared by Chow, and speedy clearance through German customs, both Swifts took a taxi from the airport into the heart of the city. Tom was struck by the stark blending of old architecture with new, ultra-modern buildings. *This*, he thought, *is a city moving forward, not stuck in its past.*

Mr. Swift asked Tom, “What do you think? Impressive?”

“Gee. It’s so different from cities like New York or Washington,

DC,” Tom replied.

“I have no idea what to expect when we get to the environmental committee’s building,” said his father a moment later. “All we have is the address. We’re not expected for another three hours, but I would love to drive past.” He directed the taxi driver to go by the address they had been provided.

“*Ja*,” the driver replied.

When they arrived, Damon Swift directed the driver to go past the building and then to take them to a local coffee house. Two hours later they left the small cafe and walked back to the building with almost an hour to spare.

After identifying themselves to the security officer at the front desk, they were ushered through a security station—a special enclosed booth that not only took a low-power x-ray scan, it also sniffed the air surrounding them for explosive residue like those used at airports.

They were met inside the security area by a small, extremely thin man with a clipped mustache. “Mr. and Mr. Swift, I presume,” he asked. “I am Horst Oberholtzer, senior assistant to Executive Co-Chair Penelope Clothiet-Warner. She has asked me to walk you through what will be occurring in...” he glanced down at a very large watch on his right wrist, “... precisely thirty-seven minutes.”

“We’ve been wondering if someone could give us an indication of what to expect from our meeting,” said Mr. Swift. He glanced at Tom.

“This is a formal meeting to request specific information from you regarding your corporation’s environmental policies as well as to request some type of assistance or cooperation from you. I have not been briefed with any additional information. Forgive me if I now prove to be a disappointment.”

“Not at all,” he was reassured by Tom. “It is just that Ms. Clothiet-Warner was rather cryptic in her phone call to us yesterday.”

“Yes,” was all the little man supplied. Indicating an elevator guarded by a man with a large machine pistol in an under-arm holster, he continued, “Ee will take this elevator to our destination.” Turning to the guard, he said, “*Wir werden gehen, sieben auszubreiten, bitte.*”

“*Ja Herrassistant*,” exclaimed the guard. Snapping to attention, he pressed a series of buttons on a panel. Within seconds the doors silently slid open and the three men entered. An operator stood at

attention near the control board. He nodded and pressed a button. The doors closed.

The elevator car traveled upward at a barely perceptible rate arriving at their floor in about 30 seconds.

Their guide walked in front of them down one of the three hallways branching off from the elevator lobby area.

He motioned them into a spacious office and offered them chairs. They all sat down.

Facing both Swifts, Herr Oberholtzer finally relaxed his features. Tilting his head to one side he said, "You probably are just about fed up with what seems to be a big run-around going on here."

"We aren't use to being summarily ordered to attend a meeting and then left mostly in the dark, I have to admit," said Mr. Swift.

With a slight twitching of one corner of his mouth, Oberholtzer said, "Certainly. Unofficially you have my apology for this treatment. My superior comes from the very upper, upper crust of British society and is use to ordering where requesting or even suggesting would better serve."

He went on to describe how he, too, was partly in the dark regarding the nature of the meeting. "Even as the senior assistant I am not within her inner circle of confidants." He attempted to provide a description of how the meeting would be managed including a warning to the Swifts that only the older Swift should reply to questioning or to ask questions.

Tom, although bothered, decided that it would be of no use to argue.

Their guide left them for a few minutes and then returned to usher them into the formal room where they would meet the committee.

A heavy-set woman wearing a slightly-too-tight tweed jacket, large pearl necklace, and black, horn-rimmed glasses looked up from a paper she was perusing. "Welcome, Mr. Swift. And, I take it that this is your renowned son, Thomas," nodding her head in Tom's direction.

"That is correct. May I ask prior to the start of this meeting how I should properly address you, madam?" asked Damon Swift giving a slight bow.

"Damon. We have known each other more than twenty-two years. However, within this chamber you should address me as 'Madam Chairwoman,'" she replied.

Banging a gavel and indicating to a stenographer to begin recording the meeting, she began, “The purpose of this meeting is to clarify several matters regarding Swift Enterprises’ environmental policies and to have you answer three specific accusations made regarding disastrous pollution events that you Swifts have systematically covered up!”

Tom couldn’t stifle a gasp. “But that’s...” he stopped at a glance from his father. Damon Swift raised an eyebrow and shook his head.

“Madam Chairwoman, I must ask that you provide us with details about these accusations and about the persons or bodies making such preposterous statements. Swift Enterprises prides itself on being as green as possible. We buy supplies from certified green companies, recycle practically everything, and even have several notable products on the market that have zero impact on the environment.”

Ms. Clothiet-Warner looked over the top of her glasses at both Swifts and then back at her papers. “I have an environmental impact study by your own engineers regarding your almost constant launchings of chemically-powered rockets. Each one leaves behind more pollutants than the city of London generates in a week.”

Mr. Swift looked at Tom and then turned back and nodded. “I can not dispute that our regular rocket launches burn fossil fuels and leave a trail of chemical pollutants behind, but each one takes supplies to our space wheel, including components and recycled solar batteries and returns with any refuse from the station plus a full load of solar batteries. Batteries, I must add,” he said noticing that she was about to respond, “which are known to cut polluting power sources worldwide by more than thirty-five percent greater than any launch ever creates.”

“May I speak, Madam Chairwoman?” inquired Tom.

“Your scientific prowess is well known. I believe that entitles you to speak. But, I must warn you. No outbursts!”

“Our underwater launch system in the Pacific means that we burn almost sixty-two percent *less* fuel per launch than even the most fuel-economic rockets launched by NASA, the European Space Agency, or any other company or country.”

“Be that as it may, *Mister* Swift,” she retorted, “it remains that you do indeed create pollution. Your giant jet aircraft not only burn huge amounts of fuel but the larger ones scorch the ground wherever they touch down. And, while your company does make a series of jet and conventional aircraft that meet or exceed U.S.

requirements, our requirements are about to become far more strenuous. A reduction of thirty percent over current U.S. minimums for anything sold outside of the United States. We can't control what you do in your own country, but we can certainly force polluters to toe the line everywhere else!"

"How?" was Tom's only response.

"Pollution, and its eradication wherever possible, are our primary concern. By whatever means. Including sanctions on companies and countries that fail to or outright refuse to cooperate! Those who fail will pay among the highest penalties ever handed down. There can be no excuses, only results."

The meeting went on for less than five minutes during which the Chairwoman outlined a series of changes that every company and nation were being charged with instigating as soon as possible. Near the end of their meeting, her attitude softened slightly, and she told the Swifts, "I know that your company tries to be one of the forerunners in protecting the environment, but there is just so much more that everyone can do. Please provide my office with a detailed report of measures you plan to take during the next three years. Anything and everything you can do will help."

With that, she banged her gavel, closed the meeting and left the room.

Tom and Damon Swift were speechless and stood there for over a minute before their escort came back to take them out of the building.

As they walked down the hallway a soft voice spoke from behind them. "Damon? A word, please." Tom and his father turned around to see the Chairwoman standing by a doorway, now clad in street clothes.

Damon Swift went to her and they spoke in hushed tones for several minutes. At the end, she smiled at him and he returned to Tom.

"What was that about?"

"Tell you once we get outside," came his father's reply.

Once they exited the building Damon Swift turned to his son. "Penny told me that this meeting was actually meant to push us to the forefront of a new G-20 sponsored project. The rebuilding of the Earth's ozone layer."

"Gosh," Tom exclaimed. "That's a huge undertaking, even if it turns out to be possible. How does she see us helping?"

“For starters, she will now demand in the name of the committee that the U.S. Government fund Swift Enterprises in this project. We have to define it, but she is sure that we will find there is a large amount of ready funding available.”

Tom was amazed, but his brain was already working of possibilities. “How come you know her?” he asked.

“Penny and I met the year I was a Rhodes scholar at Oxford. We use to get into huge arguments about American politics versus British politics. She could never convince me that a Parliamentary government was superior and I couldn’t get her to see how a legislative three-branch government was better.”

“Mr. Swift,” came a deep, but excited foreign voice from behind Tom and Damon Swift. “Please... Mr. Swift?” Turning, both men were facing an extremely dark-skinned African gentleman wearing a combination of a finely-tailored business suit along with a tribal headpiece filled with colorful feathers and shiny silks. “You must help. You are the only possible help for my people!”

“I’m sorry,” replied the older Swift. “You seem to know us, but we do not know you, sir.”

“No. I am the one who is sorry. I should not have allowed my eagerness to get in the way of proper etiquette. I am an emissary of the nation of Magurro in east central Africa,” he explained. “My name is Samuel Latumba. We are a poor nation, a leftover if you will from the dissolution of one larger country more than seventy years ago. Tribal wars and invasions ate away at the old country until there was only Magurro left. Nobody bothered to try to invade our territory as there are very few things anyone would want. Do you know much about Africa?”

Mr. Swift turned to Tom saying, “I remember something from a history class back when I was at the university. Let me see... small, rocky, with impassable jungles and no more than a dozen disassociated tribes scattered throughout about seven hundred square miles.” Turning back to the president, he asked, “Is that about right?”

“Sadly, most of it is true. We were beneficiaries of a NATO program twenty years ago that allowed us to turn our largest village of about two thousand people into a proper if tiny city, our capital of Masubbi. We now have four modern buildings of two stories each, proper housing for about half of the now twenty-three hundred in population within the city, and running water with sewage treatment facilities. Not very good and getting very old, but still working.”

Tom asked, “So how might we help you, sir. And, why do you say we are your only hope?”

“The sad part of my story is that our capital city only accounts for half of our population. The rest are scattered as Mr. Swift’s history lessons taught him, over a wide area. There are now seventeen villages around Magurro with populations of between forty and two hundred people each. And they are the problem... at least the immediate problem.

“You see,” he continued, “We have been suffering a drought for the past six years. Each year brings less and less water from rains, and our only mountain, really a tall hill, that once had snow at its peak for three or four months of the year, now has none. My people are dying from thirst. Their crops are dying as are their cattle.”

“That sounds terrible,” said Tom.

“It is worse. We cannot convince the villagers to move to the city—they fear the large, open expanses and the meager industry we have. And we do not have the ability to carry water to them. Even if we had methods, we would not have much water to spare.”

“How do you think we might help? Does your country need money? Swift Charities could provide some money to you.”

“No, misters Swift. What we need is a way to find precious water. Without it I fear that we will all be dead *within the next year!*”

CHAPTER 3 /

HOPE #1

WHAT THE DICKENS is that thing... a giant space bagel?" Bud eyed the object on Tom's CAD screen. Tom pressed a key sequence and the image on screen appeared in the floating 3-D screen field on the table a few feet away, an image powered by Tom's 3-D Telejector technology.

Tom and his father had returned to Swift Enterprises several weeks earlier. Their encounter with the emissary from Magurro still haunted Tom. Both he and his father had promised the man they would try to look into the matter. In the mean time, Tom tried to arrange for deep drilling equipment to be delivered to the capital city in hopes that wells could be drilled that might alleviate some of the problems, at least temporarily.

His contact in the State Department told him, "Sorry, Tom. They have practically no known ground water in that part of Africa. I'm afraid that a well would just be a deep, dry hole.

Pointing at Tom's screen, Bud exclaimed, "I'm never going to get used to how that thing makes wire drawings come to life, just like that!"

"It's just a reuse of the technology developed by animation studios to create some of their best CGI work for movies and TV," replied the young inventor. Secretly, he was proud of having been able to utilize the CG software provided by one of the top studios on the west coast for this purpose. He and three of Enterprises' best software engineers had reworked massive amounts of the code so that practically anything he could design in 'wire' form on his computer could be translated with little or no other special input by the user and then be projected by the Telejector.

"To answer your question, no, it's not a space bagel or even a life ring. It is hopefully going to be a self-contained, floating ozone hole patcher," replied Tom. "Technically, it is designed to revive the normal environmental ozone without causing smog and other problems associated with man-made ozone. At the same time it will gather in pollutants that float throughout the atmosphere, many of them carbon-based and primary culprits in our global warming problems."

"An ozone rebuild vacuum thingie, then," quipped Bud.

"More like a flying air filter, like those ionizing filters that don't

use fans, just the natural attraction forces involved in negatively charging the air ions at one point and having them attracted to positively-charged collector plates a bit further on. It works great in furnaces for people with breathing difficulties. They even have those desktop models and ones you can place around your home. Just wipe the collector plates clean every couple of weeks and they continue to collect junk in the air that nobody wants to breath. And one byproduct of the process is that ozone is created in the process.”

“A negative to positive ion transfer air cleaner filter ozone generating flying doughnut?”

Smiling, Tom shook his head and replied, “Actually my dear Budworth, I have been thinking of calling it an Electronic Environmental Ozone Reviver/Repairer, but that’s a mouthful. Dad thinks it should be shortened to EnvirOzone Revivicator, and I’m kind of inclined to agree.”

“Well,” said Bud, scratching his jaw, “it looks more like an ozone generating doughnut. *OzoNut*?”

Tom laughed. “Say, Bud. That’s not too bad a nickname. We may need to stick with the longer technical name for government use—you know the people we’ve met with so far have about as much sense of humor as Chow has in clothes sense. But I just feel that *OzoNut* is going to stick with this one.”

Both boys had a good laugh, then Bud sobered and asked the inventor for an explanation. Tom described how the device, perhaps as many as five hundred of them, would be released in the high atmosphere above Antarctica. Once in position, they would move around in the breezes keeping track of their position via GPS and correcting their position using a small Repelatron whenever they were in danger of straying too far out of their assigned area.

Each one would be able to cover an area of about 60 square miles each week, cleaning the air and replacing the ozone little-by-little. The hoped for effect would be an ever-building ozone patch that would begin to make a noticeable difference within 6 months of operation.

Within 5 years Tom hoped that the ozone layer in the currently void areas could be returned to as much as 75% of what scientists believed to be the original and normal height and density.

“These seem to be our best hope for repairing the ozone layer over the Antarctic. Many scientists agree, and I am one of them, that the loss of the ozone down there may simply be a normal cyclical thing, but it has a catastrophic effect on the Earth’s ability to break down

excess carbon dioxide we keep releasing into the air.”

“I going to regret asking how it all works, but I have to ask. And remember, my little athlete brain can barely hold onto basic football plays.”

“Right. At the heart of things it is a lighter-than-air balloon with solar power and an air scrubbing system like we just discussed.”

“Hey. My folks have one on their air pump that you take out and pop into the dishwasher every month or so. But you can’t send up a giant dishwasher to clean them up, can you?”

“Exactly our number one problem. The more the pollutants gather on the collection plates, the less they do. And the more gunk collected and cleaned off, the heavier the... OzoNut, as you call it, will become. These will be quite large and need to be self-cleaning and self-maintaining for flights lasting up to a year.”

“Gee, if that thing gets as dirty as my folks’ little one gets, then it’s going to need to clean off a lot of stuff practically all the time!”

“Right. And that is the one part of the problem I am struggling with. Not so much how to clean the wire grid and collectors—we can have a series of small, motorized cleaners moving along each vane every day or two—but what to do with the smuts and crud once it is cleaned off. It’s going to contain some fairly nasty stuff that’s floating around up there including a lot of carbon deposits.”

“You can’t just sort of shake it off like an old dust rag?” asked Bud.

“Absolutely not! This must be a clean operation at all times. Remember, it will be floating over the Antarctic region and we can’t drop any of the pollutants down onto the snow.”

“What a chump I am, Tom. Sorry to be so stupid,” said Bud hanging his head.

“It’s just that after being called to the carpet by the environmental committee, we must be extra scrupulous about what we do. It won’t make many friends if we clean up one problem only to make another problem pop up or worsen,” Tom said.

While he continued working on the design, Bud sat on his favorite stool occasionally asking Tom a question about anything that he thought might prompt the inventor. This had worked on several occasions when Bud’s seemingly innocent questions had led Tom to either rethink a problem or to complete the thought process on another.

“Are these things going to just fly around forever, or are they

going to need to pull into a high-flying service station every three thousand miles,” he asked at one point.

“Good question, Bud,” replied Tom. He realized that he needed to think about that aspect, and soon. Even utilizing the super-pure helium from the Swift’s undersea helium mines, that gas would need to be replaced periodically. Even sooner if any micro punctures occurred due to meteorites, a definite possibility at the altitude they would fly. “I guess that I’ll need to come up with some sort of tender craft.”

“Piloted or self-contained? Because I volunteer to *not* pilot a gasbag tender all over the South Pole.”

Tom laughed, and then sobered as an idea came to him. “Hey, Bud? Here’s a riddle for you. What’s about 16 feet long, nineteen feet wide, flies in circles and can take over control of another flying object?”

“Pick me, professor. I know the answer,” Bud said laughing, waving a hand in the air.

“Your question for ten points, master Barclay.”

“Okay. I’ll guess that it is one of the drones that fly around Fearing and the Citadel and Swift Enterprises. Am I right?”

“Give the boy a cookie,” Tom said. “Obviously, they fly far too fast to safely approach, much less capture and drag our Revivicators through the skies, but what if we come up a slower aircraft with the same capture and control capability? Something that would have an automated service bay, so to speak, that could empty the ring, refill it with fresh helium, perform a complete systems check and even perform any cleaning that the automatic system inside the ring had missed?”

“Kinda like Elmer’s Garage out on the north end of Shopton, but with robots?” Bud asked.

“Something like that,” came Tom’s answer.

The two talked about some of the details until Bud excused himself for an appointment. Tom sat at his desk continuing to think about the problem. He envisioned a mini-blimp craft with an opening at the front into which the Revivicators could be drawn into the service area where automated systems would take care of the craft. Once serviced they could pop out the back and continue on their way.

By the time he got ready to head home for dinner he had the entire operation of the craft plotted out in his head.

The following morning he contacted Arvid Hanson and asked him to come over to the underground office. Once there the two went over the details of such a tender craft. Arv's eyes lit up when Tom asked him to take over the details and construction. "I have too much on my plate right now, Arv. Besides, you and Art Willessa are going to be building the first of the Revivicators, so you will know everything there is to know about them and what is located where."

Hanson left a few minutes later with a set of sketches and notes he had taken during their conversation. Before he left he promised Tom that the prototype of the Revivicator—at least the basic flying ring and a remote control device—would be ready for flight testing in two days.

Tom then set to the task of computing how much solid pollution would be gathered in a typical day by each of the OzoNuts. He referenced several articles on the subject of negative ionization air filtering, even contacting one of the manufacturers of home-based units.

Sitting back an hour later he let out a whistle. "Gee. That's a lot!" His computations showed that the Revivicators would most likely gather as much as seven pounds of pollutants each day. That would mean that the gas-filled ring would only be able to keep the ring plus its ever-growing cargo flying for about six days before the weight would need to be removed.

That meant that any tender craft would need to be able to fly fast enough to get to 10 of the rings every day and to do their cleaning and resupplying chores in less than 25 minutes. He would need to ask his father about how many of the tenders Swift Enterprises could fund. If they could only pay to build and operate two or three, then Tom's original estimates about the number of the OzoNut devices that could be managed properly would need to be reduced by about 60%.

He placed a call to his father and brought up the subject. The older inventor thought for a moment then proposed that he contact some of their governmental associates to see if federal funding might help. "I know that more than just a few million are set aside each year to study and try to alleviate the problem with carbon buildup in the atmosphere. It would seem a natural step for them to help fund a private solution that has every probability of working."

After inquiring whether Tom remembered that he had promised to take Sandy and Bashalli to lunch and to a local exhibition of art that afternoon, he hung up.

Tom was just looking at his watch when Bud came back into the

room.

“Tom!” he exclaimed excitedly. “We’re chumps! We promised Sandy that—”

“That we would take her and Bash to lunch and the art thing. Right?”

Bud’s jaw hung slackly for a moment. “Tom? You *never* remember these things. Your brain just isn’t wired to remember these sort of things. That’s why you need me around... to remind you.”

Tom smiled.

“If you’re going to go remembering all this important stuff with the girls, then where does that leave me?”

Tom confessed he had just been tipped off by his father. After a relieved laugh Bud pointed to the clock on the wall and suggested that they head out.

The lunch was pleasant enough, and the art exhibit interesting, but Tom’s mind kept wandering to his Revivator problems.

It was a very warm day so the foursome stopped by a local cafe for some iced tea. After ordering, Tom told his friends about the heartbreaking request from the African man in Munich. On hearing of his plight, both girls had tears welling up in their eyes.

The waitress brought four tall glasses of tea and several types of sweeteners along with sugar. Tom absentmindedly poured a little sugar into his glass and stirred it in. He reached for a napkin to wipe off the water that was condensing on the outside of the glass.

Suddenly, he jumped up shouting, “That’s it!”

His companions were all startled, but not nearly as much as an older woman sitting at a nearby table. She had spilled part of her drink on herself when Tom’s outburst occurred.

Tom saw what had happened and went to apologize to the woman, and to offer to pay for any cleaning costs she might incur.

Blotting at the damp stain on her dress, she looked up at Tom, then smiled and said, “Oh, Tommy. You were always having sudden ‘eureka’ moments in class. I’d forgotten that you kind of explode like that”

“Mrs. Trunbridge,” Tom exclaimed happily. “Gee, you’re looking great. I haven’t seen you since that Junior High dance you chaperoned with my folks.”

Mrs. Trunbridge had been one of Tom's favorite teachers in the 6th and 7th grades. He had missed her quite a bit when his academic standing and grades had then moved him ahead two years into the 10th grade and another school. The two chatted for a few minutes before Tom excused himself, repeating his offer to pay for her garment cleaning.

"No harm done, Tommy," she said, using the name only she had ever used—even as a young child everybody had naturally called him Tom—"I was so hot that it actually helped cool me down. A bit faster than I had expected when I came in here... but very effective."

Tom returned to his table where the other three had just finished their drinks. "Okay, gang. Let's go," he said.

"Aren't you going to drink your beverage, Tom?" asked Bashalli.

"No time, Bash. I had a real great idea and I have to get back to my lab to get it down on paper."

The girls looked at each other and shrugged. They recognized the look in the young inventor's eyes.

On the way back to Enterprises, Bashalli brought up the African man and his country's problems.

"Oh, Tom," Sandy said. "You absolutely have to do something to help those poor people!"

Bashalli and Bud agreed. "Tom," Bashalli said, suddenly very quiet. "I have family all over Pakistan who live in small villages that have similar problems with lack of clean water. If you can help the people in that little country, perhaps you can help other people—people around the world."

In answer, Tom described in brief details the thought that had come to him in the restaurant.

He was about to go into greater detail as they arrived at the Enterprises gate when the guard motioned for Tom to roll down his window. "Mr. Swift? You're needed in your father's office right away! He hasn't been able to reach you by phone and has called here three times in the past hour."

"Please call him and let him know that we are all on the way; we should be at the office in three minutes." He thanked the guard and then drove through the gate. Parking his car in a private space next to the main offices building, Tom, Bud and the girls hopped out of the car and stepped onto the sidewalk, a moving walkway that would take them into the building and along the main corridor.

Reaching the office Tom shared with his father they opened the

door and walked in.

The elder Swift looked up and raised one hand indicating that he was on the phone but needed just one minute.

“Yes. I understand. I truly appreciate you getting back to us so quickly. It’s great news and I am absolutely sure that it is about the best investment the U.S. Government can make at this point in time.” He listed for a few seconds, then replied, “Definitely. We’ll provide all of the details within the next three weeks.” He hung up and turned back to the youths.

“I just need to call Harlan Ames... give me a moment.” He punched in a 4-digit number on his phone and was soon connected to the Chief of Security. “It’s okay, Harlan. They are all standing right here in front of me. Must have been a cell phone issues. Thanks for whatever you and your team already did.”

Hanging up, he stood up and walked around his desk. “We have been trying to get in touch with you for almost two hours. There has been a threat on Tom’s life.” The teens all gasped as he continued, “Just a phone call, untraceable, into the main switchboard. They usually just turn over a copy of the conversation to Harlan and to the local police, but this one was a computer-generated voice, and very specific about what they were going to do.”

“Who were they? What did they want?” asked Bud, cutting off Tom’s own similar questions.

“The call said that they knew where you were today and that your car would be run off the road before you could ever get back here. Then, they said, Tom would be abducted and taken far away from Shopton. That was it, but the voice did mention the museum you four went to. We called there, of course, but the doorman could only say that you had left an hour or so earlier. Your phone didn’t answer, Tom. Neither did Sandy’s or Bud’s. And I am ashamed to say that we just don’t have Miss Prandit’s number in our records.”

The girl reddened and admitted that she rarely carried her phone with her.

“The main thing is that you four are alright. I’m having Harlan put tails on each of you for the next week or two, or until we can figure out whether this is a hoax or if Tom or any one of you might actually be *in deadly danger*.”

CHAPTER 4 /

DANGEROUS ENEMIES

TOM COULDN'T BELIEVE that there was any real threat and told his father just that.

"Tom. You need to be aware that you are increasingly vulnerable. We seem to gather new enemies with each stride we make forward, with each new invention. All I want is that you are kept safe and none of you," he motioned to the other three, "are ever placed in jeopardy because of anything Swift Enterprises does."

"I understand, Dad. Sorry. So, what was that call you were taking when we walked in?"

"Ah. Yes. I had made a couple calls earlier today to some agency contacts we have in both the EPA and in DARPA."

Raising a delicate hand, Bashalli asked, "Sir. I know about the Environmental Protection Agency, but what or who is this Darpa? It sounds like a little-known Hindu god of some sort."

"Well," Mr. Swift chuckled, "it actually is an acronym standing for the Defense Advanced Research Projects Agency. It is a government group that awards monetary prizes for special advanced design and development of such things as the unmanned vehicles that are just starting to be used in warfare, as well as other high-risk research. Research that might provide some dramatic advances in military capabilities. But it is their research funding wing that is interested in providing us with some of the necessary funding we need to properly attack the global warming problem that seems to start with the loss of ozone over the South Pole."

"Dad? What sort of funding do you think they might provide?"

"Well, the figures we just discussed could be well into the sixty million dollar range."

All four of the teens whistled, eyes wide in amazement.

"Gosh, Tom," said Bud. "Would that fund your service stations in the sky?"

"With that level of funding, I am sure that Swift Enterprises could not only put up at least four hundred Revivicators, we should be able to produce and maintain a fleet of about a dozen of the maintenance craft. At least operate them for the first year."

"And after that," his father added, "we'll be in line for an

extension plus some other funding we should be able to get from the EPA folks, so we should be able to keep Tom's fleet of Revivicators up and running for at least five years!"

They all agreed that the news, while still preliminary, was very good indeed. Bud, Sandy and Bashalli excused themselves leaving the two inventors alone to discuss some of the more technical aspects of the project.

Just before leaving for his private lab, Tom stopped and snapped his fingers. "Dad? I had a thought and an inspiration while we were all in a restaurant this afternoon." He went on to tell the older Swift about watching and wiping the condensation from his iced tea glass.

"That's when it hit me," he said. "Just sitting there, simply cold from the ice, the glass started to collect moisture from the air. And it just slid down to the bottom. What if the solution to the problem in that little African nation of Magurro could be solved just like that?"

Thinking for a moment, Mr. Swift became visibly excited. "Why, Tom... that's it! Condense the water out of the air and collect it for distribution to the villagers. Even a small glass like yours in the restaurant can collect more than a half cup of water before it finally warms up."

"If we can keep the 'glass' from warming—probably using some sort of refrigerant—then the moisture will just keep sliding down and getting collected.

They talked about some of the other aspects of such a device including the need to power it in areas where no electricity were available, and to purify the resultant water before it could be consumed.

Leaving a half hour later, Tom was practically walking on air. At the end of the hallway he passed Chow, dressed in a gaudy purple and orange shirt, one of the loudest Tom could ever remember seeing on the roly-poly cook.

Shielding his eyes, Tom said, "Brand my sun spots, Chow. That's a real... a real..." he struggled to come up with appropriate words to describe the shirt.

"A real corker, fer darn sure," said Chow. "I jest got this one from an old friend back in New Mexico. His wife weaves fancy cloth for relaxation and she worked up the cloth for this little number extra special fer me." Chow looked down at the front of the blinding shirt with great pride. "Joey Smith is one lucky hombre!"

Shaking his head in amazement at the older man's choice in

bright shirts, Tom patted Chow on the shoulder and headed out of the building. At his lab, he sat down to do some design and computations on the new condensation device he and his father had discussed.

Within an hour he had the preliminary design worked up and entered into his CAD system. He sent the file along with a detailed note to the Engineering department asking them to assign someone to work on the computations for the electrical requirements of such a device. He then headed out the door and toward his car.

Just as he got there, Phil Radnor approached him. Slightly overweight, he was panting from his run. "Tom. I saw you leaving the building and thought I had better get out here pronto."

When the young inventor asked why, Radnor replied, "I'm your official tail for the evening. Where you go, I go."

"Phil. I don't need a babysitter. I'll be alright!" Tom asserted.

"Sorry, skipper. Orders from a higher authority and backed up all the way to the top." When Tom frowned at that last statement, Phil continued, "And she has invited me to dinner tonight. I understand we'll be having slow-cooked pork ribs in her tangy barbecue sauce."

Smiling, Tom gave in. "Okay. If Momsie says I have to have a guardian angel then I am glad it's you!" They headed out of the main gate in separate cars, Phil closely tailing Tom.

The evening went by quickly with everyone eating too many of Mrs. Swift's delicious ribs, mashed red potatoes and fresh green beans. The meal ended with a dessert of oven-warm carrot cake with a wonderful lemon cream-cheese sauce.

"Wow, Mrs. Swift," Phil commented. "It's no wonder the Swift men always seem so blasé about the food at the Enterprises canteen. Nothing can compare to your cooking!"

The petite woman blushed. "I just use some of the principles of molecular biology I learned back in college," she said referring to the doctorate she had earned years before but rarely used. "Then I just add a little garlic and salt and it all seems to come out right."

Everyone laughed knowing that she prided herself on the quality and the quantity of the meals she prepared. Even basic sandwiches always seemed to have a little something extra and were always delicious.

Phil started to excuse himself saying, "I'll just head out to the car after taking a look around the neighborhood. My relief comes on about 2:00 a.m."

Mr. Swift said, “Phil? Why don’t you and I take the dogs for a walk around the neighborhood to check things out. They can use the exercise—” Thinking about the huge meal they had recently finished, “and I could certainly use the exercise. Then, once you’re sure there is no immediate threat, you can come back in here.”

As the security specialist started to protest, Mr. Swift said, “It’s not an order, but I think that with your eyes and ears on alert, plus our security system running, we should all be okay. And, you will be more comfortable in here with the air conditioning out in your hot car.”

Radnor gave in, realizing the CEO of his company knew best, and he was enough of a company man to know when to agree to the wishes of his employer.

While Tom ran a complete system check on the security system, the two men went out to the kennels to leash and release Caesar and Brutus, the Swift’s two huge and eager bloodhounds. A canvas of the surrounding blocks proved that there were no noticeable threats. Returning to the house about 20 minutes later the duo put the dogs back in their kennels and headed into the house.

“All clear, dear?” asked Anne Swift. Even though she put up a brave front, both of her ‘men’ knew that she constantly worried about their well-being. She was protective of her family but realized that only Sandy could have any real idea of the emotional roller coaster she was on whenever there was some sort of threat against any of them. At only seventeen, Sandy had become her sounding board and her ‘rock’ in moments of worry.

“Warm, quiet and empty,” declared her husband referring to the neighborhood.

The night went by quickly with Radnor’s relief arriving an hour early and quietly knocking on the door to try to avoid bothering the Swifts. By morning, Gary Bradley, the 38-year-old security man—considered to be number four in the overall hierarchy of the Swift’s security department—had made two silent trips around the block taking note of every automobile parked in the street, rather than in driveways. He would check once back at Enterprises to ensure that each one belonged in the neighborhood.

Anne Swift served Damon, Tom and Gary a quick but delicious breakfast of sausage patties, fluffy scrambled eggs and fried tomato halves.

Taking their leave, the trio headed for Swift Enterprises in their individual cars all arriving at the plant less than six minutes later.

Gary honked and waved as he drove off toward the security building while Tom and his father drove their cars over to the main building.

Tom checked his email in their shared office, answered a pair of requests for personal appearances at two rival high schools' science clubs and forwarded the usual batch of "you are so rich couldn't you just *give* me some money" type of requests. These would be handled individually. And while 95% of them were simple 'begging letters,' occasionally a legitimate request from a known charity would be handled by the Swift Charities organization.

A bit later he headed to his private lab in the underground hangar where the *Sky Queen* was berthed.

Tom contacted the engineering department to see who might be assigned to his condenser project. The young engineer assigned arrived at Tom's lab fifteen minutes later. Since he was new to Tom, they spent a few minutes where Tom inquired about the young man's schooling and qualifications. Satisfied, he then called up his preliminary sketches, saying, "Toby. I'm sure you've only had a few minutes to look this project over, so don't feel bad about asking lots of questions."

"Well, Mr. Swift," he looked at Tom, "...should I call you that?"

"Tom will be fine as long as I can call you Toby," he replied. "Tobias seems a bit formal."

Nodding agreement, he said, "Okay, Tom. I stayed here at the plant until about midnight drawing up some other sketches and working up the electrical needs."

He unrolled a set of plans he had been carrying and showed Tom some enhancement on the original design Tom had created so quickly the previous afternoon. Tom asked pertinent questions as several points, but was impressed overall.

"Toby. Thank you. It looks like we can do this, and fairly inexpensively to boot! There's just one thing I think you need to know so you can adjust your computations. The Swift solar batteries you have spec'd are just about to be phased out in our product line and replaced by a new super-cell solar battery. Dad and I have devised a way to make smaller and more powerful individual cells all within the same form factor. The new batteries will provide eleven percent more amps over a seventeen percent longer period of time than our current batteries. Oh, and they weigh five percent less as well."

Doing some quick calculation on his pocket scientific calculator, Toby looked back up at Tom and said, "That means we can either

increase the refrigeration system to take advantage of greater power, or we can keep the same basic system but increase the overall condensing column a bit. What do you think?"

They discussed the matter with Tom opting to have the young engineer do a set of calculations based on both scenarios. Toby promised to get back to Tom the following morning.

Next, Tom turned his attention to a small but significant matter dealing with the TeleVoc system. Swift Enterprises had suffered a series of recent invasions into the system, the worst of which had occurred when saboteurs had used a stolen TeleVoc pin to mimic Tom's own voice and to put the youth in grave danger as a result.

He had been tossing the problem around in his mind the previous evening while trying to drift off to sleep.

A few minutes later a knock on the door sounded, followed by a blond haired head poking its way around the edge.

"Morning, San," Tom said looking up to see his sister standing there.

"Hey, big brother. I'm taking Bashi up in one of the new *Racing Pigeons* to get use to the new avionics. I thought we'd fly up to Boston and do a little shopping. Need anything? Live lobster? Bucket of clams?"

"Nah," he replied. "Just keep her down under 15,000 feet and no aerobatics until you get use to everything. We haven't changed much, but the new all-electronic fly-by-wire system might feel a little over-responsive at first."

Sandy departed promising to keep safe and to bring Bashalli back all in one piece. "Or, maybe in a nice little two-piece if you're lucky!"

Tom continued trying to work out the security problem for the rest of the morning and into the late afternoon. Near 5:00 pm, Sandy and Bashalli walked into the lab, Sandy noting that Tom seemed to have remained in exactly the same position as when she left.

"We're back!" she announced.

"Hello, Tom," her pretty dark-haired companion said.

"Hey, Bash. Good shopping?" Tom asked.

"Good flying, only so-so shopping," came the reply.

Sandy exclaimed, "Tom. That *Racing Pigeon* is an absolute dream! Why... it practically reads your mind and goes right where you want it to."

“Yeah, it is a nice little plane. I think it flies—” Tom tailed off getting a far-away look in his eyes. He suddenly focused on his sister, grabbing her shoulders. That’s it, San! By gosh. You’ve done it!”

Sandy and Bashalli backed away a few feet from Tom not knowing to what he might be referring.

“I’ve been beating my brains out trying to come up with some method of making for secure transmissions via the TeleVoc pins, and you’ve just given me the answer!”

He quickly outlined his idea to incorporate a verification signal based on the wearer’s alpha wave brain signals. “As long as the pin is within four or five inches of the wearer’s brain, we can pick up certain electrical signals and add them to the transmitted verbal message. If we just record one or two specific alpha waves and add that to the transmission, then it would be practically impossible for anyone except the rightful user to send messages.”

Both girls looked pleased, but they realized that Tom’s mind was now soaring along the stratosphere of invention while they were earth-bound. “You promised Mom that you’d be home for dinner by 6:00, remember,” Sandy reminded Tom. Both girls approached Tom from opposite sides, kissed him on the cheeks and departed.

He made a few notes on the plans and then departed for home.

The next morning Tom drove back to Enterprises and went straight to his private lab. Sitting down at his desk he called up the original schematics for the TeleVoc pins. Using the zoom feature of his design program he looked closely at the miniature circuit board and its single microchip. Within minutes he was deeply absorbed in the dual task of designing the alpha wave receiver and how it might be incorporated into the microchip.

Chow brought a light lunch of soup and a chicken sandwich a little after 1:00 p.m. that Tom only picked at.

He was mildly startled when a knock came at his door and it opened to reveal Chow.

“If’n yer gonna stick around here all night, ya might as well have a good meal,” he boomed taking a covered plate from his roll-around cart.

“Oh, Chow,” Tom replied. “What time is it?”

Laughing, the old prairie cook pointed to the large clock on Tom’s wall. “Sez it’s about seven p.m., Tom,” he answered.

“Good golly.” Tom got up from his stool and stretched his tired

limbs and body. “I only sat down here a little bit ago and that turns out to be more than six hours.” He moved over to the comfortable leather chair and low table that sat in one corner of his lab. Chow lifted the cover to reveal a plate with pot roast, a roasted potato, green beans and a small container of gravy. “You’re my salvation sometimes, Chow.”

“Ah... shucks! I only want to keep you strong and healthy so as I kin come with you on more o’ your adventures. Kin I ask what in tarnation you’re workin’ on this late?”

Tom explained the weakness in the current TeleVoc pins and how Sandy had given him the idea he was now trying to make a reality.

“Brand my walkie-talkie, Tom. You’ll get it!” Before leaving the tender-hearted cook made Tom promise to either head home after finishing his meal, or to turn in for an early evening in the bunk room Tom sometimes used when he worked late.

Tom decided that he had hit a dead end on his current approach, so he ate his meal quickly and headed home.

The following day he awoke at 6:00 a.m. sitting upright, eyes wide open. As often happened, his mind kept working on a problem even while his body slumbered. He had a complete idea of what needed to be accomplished in order to make the TeleVoc pins more secure. He dressed and raced out of the house, getting into his car before his mother could get into the kitchen to gently force her son to have some breakfast.

She resignedly waved at the door as he drove off.

Tom entered Enterprises through the private entrance used by Tom, his father and key senior personnel. Reaching his lab he jumped right into the problems. Within an hour he felt he had the solution. The only thing left was to design a micro-thin receiving antenna that would touch the wearer’s body. He tried design after design attempting to come up with a way to have the ultra-fine wire touch skin without getting in the way. The pins were worn on the collar so it was difficult to come up with some way to get through or around the fabric.

Suddenly, Tom stopped and smacked himself in the forehead. *What a chump I’m being*, he thought.

At that point Bud walked in. “I’ve got an early delivery flight up to Freeport, Maine and thought I’d ask if you wanted to come along?”

“Can’t, Bud, but you can maybe answer a quick question.” Bud agreed to do so. Tom explained the project and his new solution.

“Finally, although the current TeleVoc works with unvoiced messages it needs to have access to skin contact in order to pick up the signature alpha wave of the wearer. What do you think of new pins that you wear under your collar rather than on the outside? That way, instead of a short post and a squeeze-on backing piece we use a magnetic backing that would touch the skin at the throat and not get blocked by fabric.”

Bud enthusiastically agreed that it was both a simple and easy solution. “Sounds like it would also keep the pins out of sight. Make one up for me and I’ll give it a test when I get back this afternoon.”

An hour later, Tom contacted Arv Hanson and asked him to drop by. They went over the new electronics design and the magnetic backing. The engineer/model maker promised to have a working prototype using the original electronics by lunchtime and a prototype of the new electronics within three days.

By the time Bud returned Tom had put the TeleVoc project behind him and was deep at work on the design of the cleaning mechanism for the OzoNuts. He stopped long enough to hand the new pin to Bud asking him to figure out how to put it on without prompting. Bud immediately flipped up his collar, set the now flatter and slightly larger body under it and slipped the magnetic back plate inside the collar, feeling the two pieces snap together as the magnet found the metal back of the TeleVoc.

“Easy, Tom. I did get it right, didn’t I?” Bud asked.

Tom laughed and slapped his friend on the back. “Perfect! Take a walk or a drive out to a couple sites on the grounds. I need to make sure that the magnet doesn’t interfere with the transmission or reception of messages.”

The test went very well. Tom was elated and called Arv to let him know the results.

He then turned back to his OzoNut cleaner. The process was simple... each of the twenty-four horizontal vanes were about eight feet long, a half-inch wide and five inches from top to bottom. They would attract the black powdery collection of smog and other particulates along with just enough humidity to make it a slightly sticky mess. Each vane would need to be wiped clean on both sides as well as the narrow top and bottom areas at least once per day, and that collected gunk would need to be transferred into a holding tank.

Tom decided to use the same negative to positive ionization effect that would work for the vanes in the cleaner mechanism.

His real brainstorm came when he figured out that a single serpentine vane would allow for the use of a single cleaner incorporating a vacuum that would simply travel from one end, back and forth, until it reached the far end of the vane.

It would then reverse polarity and the dirty cargo would drop into the holding tank. It would make a return trip to the starting point to wait for the next cycle.

Again, calling Arv, he described the new single vane approach. “Great, Tom!” the man exclaimed. “That’s going to make the build that much easier and probably about twenty percent lower cost.” He said he would have a working mock-up ready by closing time the following day.

Tom was about to leave for the day when he received a call from Munford Trent, the super-efficient secretary who took care of both Swift’s.

“Tom. This is Trent. Your father needs to see you *right away!*”

CHAPTER 5 /

ENEMY ABOVE...

“DAD,” TOM SAID as he entered their shared office. “Trent said you needed to see me pronto. What’s up?”

His father said, “Senator Grimsby’s blood pressure.”

He explained that he had been on the phone with the legislator for the past half hour. “He has taken it upon himself to get in the way of our environmental projects. He somehow got the ear of the G-20 folks and convinced them that he needs to be the main U.S. contact point. He says that we can’t be trusted with a big government budget so he wants to have final say on what we do with any money we receive.”

They discussed how the situation could be made to work with Damon Swift explaining to his son that the senator was an old business foe who held Damon Swift to blame for personal failures. “It isn’t going to be easy. My hope is the Herr Oberholtzer can help us.”

Before leaving the office Tom said to his father, “I want to take the *Sky Queen* down to the Antarctic with a crew of scientist to make a survey of the ozone layers over the entire area where we want to put out Revivicators. Any objections?”

“None, son,” came the reply. “I would suggest asking our contact in Germany if he has a group of appropriate environmental scientists that might like to accompany you. That, plus I’ll call the State Department to see who they would like to have go. You should be able to head out in four or five days.” Holding up a hand to fend off Tom’s forthcoming objections he continued, “that way we can tap into their funding sources to offset some of the costs, plus you will get a broad spectrum of expertise.”

“I suppose that it will keep Senator Grimsby off our backs as well.”

“Oh, I wouldn’t go that far. He could find fault with God and then lecture him on it.”

Tom departed to begin preparations.

The following day Tom received a call from his father. “Great news, Tom,” he said. “Grimsby is going to be corralled a little by Herr Oberholtzer. He informed the senator that the G-20 people outnumber him nineteen to one so *they* will determine the U.S.

point of contact. Seems he also got knocked down a peg by a fellow senator in a federal environment committee hearing this morning. So, for now we don't have to worry about him."

Tom was very pleased with the news.

"Oh, and another thing, Tom. Herr Oberholtzer has a team of nine scientists from both Europe and North America that he would like to have fly down with you on your Antarctic trip."

"Great, Dad! When can they assemble here at Enterprises?"

"In about two days. He supplied a complete list of the people, and I sent it along to Harlan for checking. Unlike a few past experiences it seems that Herr Oberholtzer has a complete dossier on each member of the team along with multiple photos. It will be almost impossible for an impostor to get in on the trip."

Tom spent the next 48 hours working almost around the clock preparing the equipment he would require for his own personal measurements along with ensuring that there would be ample room for the equipment from the scientific team members. Each had supplied a list with approximate weights and measurements. He decided to forego taking any of the small aircraft along in the *Sky Queen's* hangar in order to accommodate everything else.

He did, however, reserve room for a pair of 2-man snowmobiles. These were powered by a hybrid alcohol/diesel engine that Swift Enterprises vehicle engineering group, along with Tom's design ideas, had developed more than two years previously. The fuel mixture was designed to remain liquid and stable from temperatures between -60 degrees F all the way up to 120 degrees. A revolutionary spark ring at the top of each cylinder acted to explode the mixture so completely that the motor used thirty percent less fuel than any single fuel engine of similar size.

Each vehicle contained a slide-out sled component that allowed them to haul over 200 pounds of payload along with two adults. They might come in handy, Tom believed, should the group find it necessary to investigate potential areas for the location of the tender aircraft and any support teams to service them.

On the arrival day Tom took a shuttle bus out to the visitor terminal at the main runway. Minutes later a U.S. Air Force transport jet touched down and taxied up next to where he stood.

The main door swung open, a stairway extended out from the fuselage and dropped to the ground. The science team members disembarked, warmly shaking Tom's hand and admitting that this was going to be one of their dream assignments. Tom waited until

the last one, a short, rather chubby man with only a hint of a hair halo around his head managed to get to the bottom of the stairs dragging a large duffel bag behind him.

He stood before Tom, bent from the waist and clicked his heels together. “Ach! Herr Zwiift, I prezume,” stated in a heavy German accent. “I am Herr, or razzer Doktor Hans Biebel from zee Heidelberg Academy. I prezume zat you haff received my credentialz?”

Tom shook the man’s hand trying hard not to bend down to the man’s diminutive height, which he figured must be only slightly over four feet. “My pleasure, Doctor,” he replied. “We received everyone’s credentials the other day and have checked them. Welcome.”

While a team of Air Force men unloaded the experimental equipment packages for the scientists, Tom turned to the group at large and continued. “Lady and gentlemen,” he began nodding at the single female scientist whom he knew to be Eloise Simkins from MIT. “Many of you are known professionally to my father and me, and several of you we know personally. To those we have not yet met I welcome you to Swift Enterprises. We will be heading directly to our briefing center where our head of security will verify everyone’s identity—a formality—and issue you badges which will allow you to move around most areas within the facility without setting off alarms.”

“Where are we not allowed to go, Tom?” Eloise asked.

“Well, we have three top secret development and engineering buildings located to the west of our main building, our destination right now, that you will not be able to enter even if you wanted to. Plus we ask that you limit your explorations and avoid both the top floor of the main building as well as our underground hangar, over there,” he said pointing at the low roof on the tarmac a mile distant.

The group picked up their bags and boarded the bus, Doktor Biebel lagging behind as he struggled with his luggage. Tom offered to assist but the man scowled at him saying, “It iz up to me to pull both my own veight az vell az zee veight of zis far-too-large bag I chooze to bring.” With that, he hefted the bag onto his shoulder and marched over to the bus.

Harlan Ames was waiting for the group and he and Phil Radnor made quick work of checking everyone’s identity and issuing the necessary temporary badges and access cards.

Tom’s father joined them just as Tom was about to begin the

briefing. He shook the hands of each scientist and exchanged personal greeting with those he knew. He and Tom proceeded to acquaint the team with Swift Enterprises objectives for the Antarctic visit, assuring them that Tom and his crew would take care of all Swift experiments and tests while the scientific team would be afforded as much opportunity as time and weather would allow.

“Fortunately,” he concluded, “all weather reports indicate that you will have four beautiful days down there. Just a little wind in the evening hours, but,” he laughed, “as you well know the days are over eighteen hours long at this time of year. And, it will be about minus five degrees Fahrenheit or minus twenty or so Celsius. Good luck to you all.”

Tom turned the group over to Munford Trent who had entered the room. He would help each team member to their assigned quarters and had already arranged for a team dinner at one of Shopton’s most desirable restaurants that evening.

The following morning the group assembled back at the conference center where Tom gave them a twenty-minute overview of the Swift package of experiments and then asked that each team member give a quick description of theirs. He took notes throughout their speeches nodding and smiling as the list began to show that many of the experiments he had *wanted* to undertake but had left off his lists due to time or storage limits were being covered by the team.

Everyone agreed that all information would be immediately shared and that duplicate experiments would be limited to instances where overlap would provide better or additional information.

They had a buffet breakfast provided by Chow before Tom asked them to assemble by the underground hangar in one hour. He had the Flying Lab brought to ground level and had already checked the hangar deck of the giant aircraft to ensure that everything had been properly stowed.

The one item Tom made absolutely sure was stowed in the hangar was the first prototype of his Revivicators. Arv Hanson had produced a miracle by giving Tom a fully flight-worthy version in record time. The only missing functionality was the cleaning mechanism for the ozone-producing vanes.

“She’ll float along and stay within a twenty square mile area once you launch her, skipper,” he told Tom. “We even rigged a radio beacon to send up a test report every twenty-four hours to the Outpost.”

Tom expressed his gratitude for the hard work then watched as the deflated OzoNut and its tank of helium were stowed.

As the team arrived he invited them to double-check that all of their cases and boxes were on board. Everything checked so the *Sky Queen* was towed over to the special thermal tile area designed to keep the flaming hot lifters from burning through the tarmac. Tom applied thrust and the jet went zooming to its flight altitude.

The trip took just over nine hours and arrived in broad daylight. Tom landed the *Queen* and directed the unloading of the inflatable Quonset-style building that would house the team as they worked during their stay. Tomasite foam was pumped into arched ribs to give it its shape while insulating foam filled in between fabric layers to provide for their comfort. The floor was also filled with a layer of the quick-setting foam and the building was ready for habitation within an hour.

The rest of the day was spent hauling everything from the *Sky Queen's* hangar and into one end of the new building. Satisfied that everything was going smoothly, Tom asked Bud if he would like to do a little exploring.

“Man, would I!” Bud exclaimed. “Do I get my own snow rocket?”

“No. I think we should just take the one, at least on this trip.” The two pulled on waterproof jumpsuits over their insulated clothing and were soon roaring off over the snow.

“Where are we heading?” Bud yelled over the sound of the engine and the wind blowing past their faces.

“I want to see what can be seen from that ridge a couple miles over there,” Tom replied pointing at a rise of several hundred feet. “I want to know if there is any good place for one of the stations to service our ozone machines’ service craft.”

They reached the bottom of the hill in quick order and stopped. Tom scanned the hill trying to pick out a path that didn’t look too dangerous to attempt. Pointing to the right he asked Bud, “Do you think that way past the huge chunk of ice would be best?”

Bud agreed and they were soon driving up the hill. Once past the ice boulder it became obvious that the route would be blocked within the next 150 feet. Tom stopped, then steered the snow machine around in a u-turn and headed back past the ice boulder. They tried three other possible routes with each one ending in impenetrable walls of ice.

Sighing, Tom maneuvered them back to the bottom of the hill and

drove a few thousand yards farther on. They stopped and scanned the hill ridge for potential paths to the top. Nothing could be seen that didn't include walls of ice.

"Looks like we're out of luck here, Tom," Bud said.

"Yeah," Tom agreed, disheartened. "Now I wish I had tried to squeeze in at least the Skeeter so we could just hop up there." He was about to start up the snow mobile again when he heard a roaring coming from the south. Taking out a pair of binoculars from a pocket he trained them toward the sound. He was only able to zero in on the source as it disappeared over the horizon. "Hmm. That looked like a small jet. I didn't get a good look but I'm pretty sure it was some sort of military fighter."

They waited a few minutes to see if it would return, but nothing else could be seen or heard. They headed back to the *Sky Queen*.

The next two days were a flurry of experiments, hourly weather balloon launches, wandering scientists that had to be searched for and one instance of digging Doctor Biebel out of a snow bank. Tom finished his measurements on day three and spent the remainder of the ground stay inputting both his and several other scientists' data into his laptop.

Among the data he and the others had obtained was the discovery of a curious and slow moving layer of wind at about 77,000 feet. It never seemed to measure greater than 10 MPH and rarely changed direction more than a few degrees in any minute.

Tom believed this was a little too low for the location of the OzoNuts, but it was certainly worth investigating in greater detail. He sent up a special miniature rocket containing a pressure cylinder filled with ozone. At the target altitude it released its cargo and then parachuted back to the ground where Bud retrieved it. Tom, in the meantime, had used a special filter and optical camera to record the spread and density of the ozone.

"What's the verdict, Tom?" Bud asked when he returned from the rocket retrieval mission.

"I'm not so sure that we are going to need to go to the higher altitude of the original ozone layer," he replied, the surprise noticeable in his voice. "We released about twenty cubic feet of ozone up there which sort of held together in a nice, neat cloud. It stayed together for more than ten minutes and my last measurement shows that it is still in the same area, just spread out a bit.

"Is that good?" Bud inquired.

“Well, it might be that this quiet area up there could be used to spread out our little OzoNuts. If everything stays in that same 2,300 foot layer of low winds then we could have a workable patch in place within months and not years. It still wouldn’t be high enough to fix the real problem, but it might provide ample protection and slow down global warming!”

They discussed it for another fifteen minutes until Tom mentioned that it was time to radio his father. He reported the findings to the older scientist and was gladdened to hear his father concur that it was something very worth further study. “Perhaps we could do our flight tests of the Revivicators in this lower zone. A fleet of a dozen or more should be able to produce a wide enough umbrella to set up more refined testing equipment and to see if it can reduce the heat that comes through.”

That evening Tom stood up at the end of the meal and told the gathering of scientists what he had discovered. They were more than enthusiastic, with several of them providing additional information that seemed to bear out Tom’s theory.

“That would be a wonderful thing if it turns out to be true,” said Martin Tennant, a high-altitude weather specialist from Canada. “And it would be high enough so that pesky jets like that one that flew south of here this morning shouldn’t disturb it.”

Tom paled. “What jet, Martin?” he asked visibly shaken. “Did you get a good look?”

Seeing the young man’s reaction to his off-hand casual comment, Tennant replied, “Oh, it probably wasn’t anything. Maybe some sort of supply jet for one of the permanent installations down here. I just saw it briefly near the horizon flying to the east at about ten this morning and then heading west maybe a half hour later. Is it something we should be worried about, Tom?”

Tom’s composure returned he assured the gathering that it was probably nothing, but he was secretly worried. This was the second sighting. According to his charts there was no civilian settlement within 800 miles of their current location and that one was to their immediate west.

The final day was spent completing all planned experiments. Several of the team had enough time to repeat experiments and measurements in order to collect corroborating data.

There were no further sightings of the mysterious jet but Tom had radioed his father that morning of the sightings. Damon Swift assured his son that he would call one of their government contacts

to report the incidents and to check to see if such flights were known to the international stations down there.

Well satisfied, Tom assisted the others where he could. He and Bud also took out the pair of the snowmobiles on several occasions looking for a route to high ground. They found nothing and Tom concluded that either this area might be a sunken spot or more likely it was an ancient impact crater.

Before closing up the *Sky Queen* for the night Tom took a measurement of the area where he had released the ozone. To his delight there was still measurable extra ozone within an area of about 3,000 feet from the release point. He spent an hour making notes in his personal log and then went to sleep.

The final morning was a hustle and bustle of activity. Everyone suddenly realized that their time was coming to an abrupt end and were trying to cram in, "just one more little measurement, please?"

Finally, with all experiments concluded and all equipment loaded back on board, Tom sent the *Sky Queen* flying skyward. He flew around in a wide circle following the ridgeline of the valley they had been visiting. The more he looked at it the more assured he was of his theory of it being an old meteor impact site.

Tom's final task was to launch the test version of his OzoNut. At 77,500 feet he left the cockpit and suited up in high-altitude gear. He helped Hank and Art Wiltessa unpack, inflate and check out the Revivicator.

With a smile and a fond pat to its side, Tom detached its tether and the threesome gave it a shove out through the hangar door.

It drifted back and away from the *Sky Queen* and was soon a dwindling dot. "See you in a couple weeks," he said to the disappearing device.

Tom returned to the cockpit and turned the giant jet north and on its way back to the United States. He decided to reduce their height altitude and soon had the jet racing north at 60,000 feet.

Within moments, the radar showed more than a dozen fast-moving objects coming at the *Sky Queen* from every direction, all aimed to converge on the plane at the same time *in about 11 seconds!*

CHAPTER 6 /

... ENEMY BELOW

TOM REALIZED that the speed of these objects were far too fast to be manned aircraft, that they must be missiles of some sort and that these missiles were homing in on the *Sky Queen's* hot lifter exhaust. He knew that simply trying to move out of the way would do no good. Their speed of Mach 3 was greater than the *Queen* was capable of surpassing, so out-flying them was out of the question.

With everyone in the cockpit watching in horror, he sat at the controls counting down. When he reached '2' he hit the main lifter control switch shutting all of them down at once.

The *Sky Queen* dropped with a sickening suddenness and managed to be almost 300 feet below when the missiles collided with one another having had no time to react to the now-elsewhere giant jet.

The concussion of the explosion and huge fireball rocked the *Sky Queen* as she dropped, but Tom kept a tight grip on the controls as he dipped the nose down to gain flyable airspeed. He started to add a bit of forward thrust then thought better of it as it might be attractive to further incoming missiles.

"Skipper!" Hank shouted. "Another blip coming in fast... looks like it's headed behind us." Pausing to check the scope he finally said, "It's going to miss us by miles. We're safe."

"But, Tom... all your hard work. The OzoNut. It's lost," wailed his copilot.

"I'm not too sure about that, Slim," he replied laying his hand on the other man's forearm. "Remember, it doesn't have much of a heat signature and can't be seen on radar. That, plus it doesn't broadcast anything out except for its daily microburst of status info. Even that is supposed to go up to the Outpost and not directly down to the ground. I have the feeling that when its first report is due that we'll be hearing from it."

Deep inside, despite his outward calm, Tom was worried. Would the OzoNut be safe or would his unseen enemy have been able to track it somehow and destroy it?

Tom could only hope. He felt heartsick at the thought of the loss of his test device but he knew that he must pilot the *Queen* out of harm's way.

He let the aircraft continue to drop and to pick up enough speed

to bring the nose up and to give her some degree of control. Then he turned to the others who were still wide-eyed and smiled. "Sorry, guys." He picked up the intercom microphone and said, "Lady and gentlemen. I am sorry about that but we were just attacked by a pack of missiles. The sudden drop seemed the only way to get out of that situation. Please let's all check in so we can make sure nobody was injured."

By this time, the *Queen* had dropped down almost 20,000 feet and had enough forward speed to fly on for more than 20 minutes before Tom would have to fire up the hot jet engines. During that time all hands kept a lookout at the radar and other instruments to see if they might detect anything else that could ruin their day.

After 15 minutes, Tom declared that the emergency and the danger must be behind them; they had already been traveling at 500 knots per hour so he estimated that they were more than 75 miles away from where the danger began and should be out of harm's way.

He restarted the forward propulsion jets and increased their speed to Mach 1.6, and changed their direction of travel every 2 minutes to avoid anyone trying to guesstimate where they might be at any point in time.

Finally, after an hour, Tom sat back and let out a relaxed sigh. "And, that my friends, should be that. At least for now."

Late in the day, they landed at Enterprises and offloaded the equipment. The scientists prepared to board their waiting Air Force transport jet after exchanging handshakes and hugs with Tom and his crew.

Speaking for the group, Eloise told Tom, "You provided us with the opportunity of many of our lives. That, plus the scare to just about end them." She smiled, then added, "We will be providing one another with all of the details of our experiments as well as sending them on to Swift Enterprises. Thanks, from all of us!"

Tom smiled as the group departed, then he hopped on a scooter and headed back to ensure that the *Sky Queen* was berthed in its underground hangar. He then climbed into his car and headed out the main gate for home.

The next morning, rested and ready to plunge back into work he arrived at Enterprises about 9:00 a.m. He met up with Bud near the main Administration building. They headed directly for Tom's office. There, he reported everything to his father including his fears for the loss of the device.

"You know, Tom, when you began describing the attack I also

thought of the probable loss of the Revivicator. Now that I come to ponder it a bit more I believe that any pessimism may be well founded. It also means that I have a suggestion for your production model... rather than having to wait for up to twenty-four hours for an automated report, you need to build them so they can respond when required to do so.”

“But, security,” said Tom. “

“Think, son. Where do they send their information?” asked the elder Swift.

Tom looked sheepishly at his father, “Right! They send it straight up to the Outpost on a tight bandwidth using the Private Ear equipment. Somebody would need to be in the right position at the exact right time to intercept it.”

Bud cleared his throat and inquired, “I thought that the Private Ear meant that if somebody was right in the line of communication, and the beam is so small, they interrupt the transmission and that would tip you off that something was up?”

Smiling, Mr. Swift replied, “Well, perhaps in about ninety percent of the cases. It is a tight beam but down over the Antarctic it must travel a long way through the curved atmosphere to get from the South Pole up to the equatorial geosynchronous position of the Outpost. It is a little over ten meters wide when it get to the station. The likelihood is slight, but there could be someone a space ship or even a high-altitude aircraft at just the right point to intercept a transmission. The security comes in the signal taking only about one hundredth of a second to transmit, plus all data would be highly encrypted.”

Turning to Tom, he added, “But I suppose for added security that you could program them for more random patterns of flight so that by the time anybody might translate positional data—the only data that might be of use to an enemy since we will gladly share the other data—and get there to do something about it, the Revivicator could be miles away and difficult to spot visually.”

“It could work at that, Dad,” Tom said.

“I know one other thing that might help, at least until we figure out who is trying to sabotage this effort and they are behind bars... flights of unmanned drones like we use at Fearing and the Citadel. If we outfit them to be solar powered for long-term patrol flight and only jet powered for when they need to go after someone or something, we could probably keep them up for a couple weeks at a time, not just the thirty-six hours of the ones we currently use.”

Tom pondered this for a moment, then said, “What if they were

totally solar powered and had high-speed rocket interceptors with some sort of electromagnetic jamming device, something could defeat most known missile control computers?”

“Just so long as there are no weapons involved, you have my support,” said Tom’s father. “Swift Enterprises would rather replace a fleet of your OzoNuts than risk an international incident, provoked or not!”

Tom agreed saying that he would get to work on the new security drone system the following morning. Turning, he reminded Bud, “We’ve got to remember that concert this evening with the girls. They claim we absolutely promised them.”

Both boys grinned and made their departure from the office. Bud left Tom at the end of the sidewalk and headed for the research library where he hoped to continue his search for antidotes to the hot Thai sauce he had experienced weeks earlier.

Tom went down to his private lab next to the *Sky Queen*.

His cell phone beeped a special code Tom recognized as coming from Security. He answered and was soon speaking with Harlan Ames. “Skipper. Big news. We reviewed the *Sky Queen*’s radar recording from your attack. Right on the edge of the 20-mile ring there are six dots, probably jets, all low and closing on your position. Each one splits into a couple of high-speed contacts and the primary contacts disappearing off the screen seconds later.”

“Looks like we have an enemy with more than a half dozen attack jets, doesn’t it?”

“Is sure does. Tom? I’m passing this info along to both the Air Force as well as Homeland Security and NATO. This may have happened thousands of miles away from U.S. air space, but it was a definite attack on a U.S. aircraft. They’ll need to know.”

“Anything on the other missile? The one that headed behind us?”

“Nothing to report there. One NASA Earth mapping satellite just happened to be scanning the region near your position when the attack happened. Their photos only show the explosions right above you. Nothing behind you. Maybe the other missile just fell out of the sky,” he added hopefully.

Tom thanked the ever-vigilant head of Security and then signed off.

He made a few phone calls and then headed over the Swift Construction Company. There, he walked into the main production building where the *Sky Queen II* was being assembled.

He looked at the partially completed giant and smiled at what he

saw.

Even though this new aircraft was strikingly similar in design to the original *Sky Queen*, he was in awe of its overall size. To him, it was the same difference between looking at a 35-passenger commuter jet and a 300 seat jet airliner. Same shape but what a difference in size.

Walking over to the shift foreman he inquired, "How's it going, Fred? On schedule?"

"Oh, hey, Tom," the man replied turning at the sound of Tom's voice. "Well, the good news is that overall we are at least a week ahead of the build schedule on this frame. The not so good news is that the last two batches of the photovoltaic plastic sheets have come up deficient in power output."

"By how much?"

"Better than twenty percent," was the reply. "Or worse, rather. It looks like our main supplier has had some production problems. They are as surprised as we are. Could even be sabotage! The FBI had been contacted and so has Harlan Ames."

"Do we have any alternate supply?" asked Tom.

"Unfortunately, no. At least nobody that can do sheets in the size and multiple layer density we need," Fred said.

"Where are they located, Fred?"

"Here in New York, just farther west. Out by Batavia." He reminded Tom that Pederson Photovoltaics was a small company that turned out only special orders such as those from Swift companies, and had a small staff.

Tom had an idea. "Fred? If they are fairly small and are having problems at their current location, could we set them up at the Connecticut facility the government recently let us take over?"

"I guess so. I can call their owner, Paul Pederson, and ask him." The manager walked over to a desk and picked up his phone. Asking his assistant to connect him, he stood waiting for the call to go through, smiling at Tom. He soon spoke into the phone, waving his free arm around while obviously describing what Tom was suggesting. Covering up the receiver, he turned and asked Tom, "Can we transport his production line? It evidently breaks down into seven sections, each about ten feet by 15 feet by six, with the heaviest weighing just under two tons."

"Sure," Tom replied. "We can send over a couple of our cargo jets to pick everything up. Find out where the nearest airport is and let's see if we can do it over the weekend."

Tom walked out of the area and back to the airframe construction area. Looking up and down and side to side he took in the amazing scale of the plane. It was still only bare frame members but the scale of things... As he walked around, various workers smiled and waved at him, many greeting him by name—most of whom he had known for years. One worker didn't look up. In fact, he turned away from Tom as he approached and hurriedly walked around a workbench area and disappeared from view.

Thinking that his was odd, Tom went to the closest worker he knew by name and inquired, "Doug? Who was that guy working over by the starboard landing gear bay?"

The man, working on an electronic circuit pod attached to the underbelly of the giant jet's central lifter section looked over where Tom pointed, but replied, "I don't know him very well, Tom. Been here about three months and a bit stand-offish. Never goes out for a beer with the guys after work sort of guy. Sorry."

Tom inquired as to the man's name, wrote it down in his digital assistant and set a reminder to call Harlan Ames to ask about the man. He had an odd sensation he might have seen the man before.

As he left, Fred came jogging up to him to explain that the Pederson facility would stop all work immediately and get ready to transfer to the new location on Saturday. Tom activated his TeleVoc and made the necessary arrangements, all in the perfect silence the TeleVoc allowed. He shook Fred's hand and asked him to convey a pickup time of 10:00 a.m. that coming Saturday to Mr. Pederson. He then took his leave to drive back to the office.

Arriving back at about 5:00 p.m., he TeleVoc'd Bud to find out where he was.

"Just heading into the main building now, Tom. Should be in your office in less than four minutes."

When he walked in the door, Tom was just phoning to the Swift home to see if Sandy and Bashalli were still going to want to go out that evening.

Bud stood by his favorite stool waiting to hear what Tom might say.

A rumbling was felt through the floor. A sudden sharp jolt slammed the floor hard to one side skidding out from under the boys.

Tom and Bud were thrown from their feet landing in a heap against Tom's desk. The motion swiftly ebbed and the floor stopped moving. The phone receiver was swinging wildly and banging against the desk.

“Earthquake!” shouted Bud.

“It can’t be,” said Tom. “There isn’t a fault line within two hundred miles and that was strong enough to make this practically the epicenter.” Tom got up and grabbed the phone. “Sandy? You still there? Are you and Mom okay?”

The line was giving the busy signal. He tried jangling the receiver buttons, but only succeeded in cutting off the line.

Tom tried to TeleVoc the Security office. The system seemed to be out of commission, so he picked up his telephone handset. The switchboard operator explained that there were dozens of calls coming in from all over the Enterprises grounds and even a few from the immediate surrounding areas, but she would put Tom through to Harlan Ames as soon as he finished his current call.

“Tom. Good grief!” said the harried security chief. “What the heck was that?”

“I don’t know, Harlan, but do you have any reports of injuries or damage?” Tom asked.

“Lots of broken glass, at least in the building where we still use traditional glass. Your program of replacing glass with transparent Tomasite is really going to pay off. Even if every glass pane is broken, that’s now only about eighteen percent of the total. Anyway, I have one report of an injury; one of the student engineers had a book case fall over on her and it looks like she may have some broken ribs and a concussion. Doc Simpson is going over to see her right now.”

“Anything else?”

“I’ll have a complete list in about an hour, but for now it looks like a lot of building cracks, a ground shift under runway one-four that has buckled a section about two hundred meters long, several aircraft were damaged by falling ceiling tiles in various hangers... things like that. Probably going to be a couple million dollars worth of damage at the low end.”

“Hang the cost, Harlan,” said Tom rather more shortly than he really meant. “Let’s just make sure that people are all right, okay?”

“Sorry, Tom. I didn’t mean to make it sound like a money thing. I’ll be back to you as soon as I have any other info on our people. Oh, by the way,” he added, “George Dilling has already had three calls from Dan Perkins down at the paper. Says they never felt a thing, but he’s received more than a dozen panicky calls from people who live within a quarter mile of here... mostly to the north. Anything you want to add to the standard, ‘we don’t have a statement because we don’t have answers, yet’ response?”

Tom said that he didn't and then also apologized for his sharp words and rang off. He picked up the receiver again and dialed his father's cell phone number. The elder Swift answered after just a few rings.

"Thank heavens your okay, Tom," he said. "I just got off the phone with your mother. She and Sandy are fine. Bashalli was standing up next to the big picture window in the living room when the quake hit and it bowed a little but didn't break. She did back away from it and sat down rather suddenly on the old coffee table. Good thing the window was Tomasite and not glass or there might have been more serious injuries. The table has now seen its better days, but otherwise everything at the house is in good shape. Your young lady is evidently much more concerned about your well being than her bruised backside, however."

Tom could sense that his father was sporting one of his 'knowing grins' right at that moment. The thought embarrassed him and he could feel his face blush slightly. "Under the circumstances, I believe your date is being postponed."

"You know, Dad," Tom said composing himself. "I'm not so sure that was an earthquake."

"What makes you think that, Tom?"

"Our position in relation to all known tectonic plates and fault lines plus the strength of the jolt added to the briefness of the jolt. Nobody more than a few thousand feet outside of the immediate Enterprises area felt it. And most of the reports from outside have talked about the tremors to the north where only a few people live. To me it felt almost like an explosion! And, you remember those 'quake' machine the Brungarian Sentimentalist built that did so much damage around here when we were building the Exman for our space friend's energy being?"

Mr. Swift whistled. "Oh dear! We have to hope nobody was able to reproduce that machine. Do you think that someone could have placed a bomb underground below Enterprises without our knowing about it and then detonated it just now," he asked incredulously.

"I honestly don't know," said Tom. "It just doesn't add up to earthquake as far as I can see. But, I'll look into things right now." After a few other exchanges of information, Tom said goodbye and hung up.

I may not know what it was right now, Tom thought to himself, but I darn well will find out!

CHAPTER 7 /

“TERRORISTS IN OUR MIDST”

AFTER CHECKING with the National Geological Survey department in Washington DC the next day, Tom was even further in the dark than before. There was no indication that there was or ever had been a fault line within 200 miles of Swift Enterprises. To top it off, the rumbling and earth tremors had only been felt in a five-mile radius, with the epicenter plotted to a location more than a mile underground and centered directly under Swift Enterprises!

He walked back from his underground lab to the office he shared with his father.

A little more than an hour later, his father returned from a meeting in Boston with one of the Swift Construction Company’s main suppliers of carbon fiber fabric used in most of the aircraft built by the Swift companies. Tom was so lost in thought that he didn’t notice the older Swift standing in front of him for more than a full two minutes.

“Damon Swift to Tom. Damon Swift to Tom. Come in, please,” his father was quietly chanting when Tom suddenly registered the presence of the other man.

“Oh! Oh, Dad! Sorry. I was lost in thought about the explosion.”

“So you really think it was an explosion?” his father asked.

“There is nothing else geologically or technically that could account for what we experienced. And, I have an idea how to find out.”

Tom outlined his plan to use of the earth blasters, fitted with the mechanical grinding head rather than the ionizing head, to dig directly down the where the likely activity had occurred.

He would outfit the device with a radiation detector and rig a special capping mechanism, similar to the one he had first installed over the undersea helium mine while developing his Hydrodome. At the first sign of radiation—for Tom feared that somehow an enemy had managed to tunnel under Enterprises and plant a nuclear device—the cap would slam shut cutting off any spread of radiation.

After suggesting that Tom also build a Tomasite-coated concrete bunker around the capping device, his father concurred with Tom’s plans and gave the go-ahead. “Tom. If there is radiation down there, then you’ll lose the earth blaster; you wouldn’t dare bring it back up

and release radiation. I think you should use the oldest unit we have, even your first test model should work with a bit of inexpensive updating.”

Tom promised to make a few modifications to his model blaster and that he foresaw being able to begin the dig on the following Monday.

He was astounded to find that his model earth blaster was not in its storage bay in the auxiliary building next to the underground hangar. He knew that it was occasionally removed to be used for small-scale demonstrations to potential corporate and governmental buyers, but had believed it to be returned more than a week before.

After checking the sign-out/sign-in logs on the company computer system, he made a few calls to the previous five people who had borrowed the device. Nobody could shed any light. Each one had carefully checked the device out, used it in the prescribed location out near the north east corner of Enterprises—an area over many layers of bedrock and quartz—but had also returned the device, plugged it into the computer system to download all telemetry and operational data, and then had locked it back into its container.

Hoping that the missing blaster was just an oversight, he contacted Security. Phil Radnor answered his call and listened with dismay.

“Tom,” he said. “We’ve had two other items go ‘missing’ this past week or two. Along with your earth blaster, the sound boomer we captured when you developed your Sonic Silentenna disappeared a few days before an industrial oxy-acetylene rig went missing.”

“How much total gas, Phil?” Tom inquired. A sudden thought had occurred to him.

“Well, the acetylene tank is about five feet tall by fifteen inches wide, but fully loaded it contains the equivalent of almost four hundred cubic feet of gas. Ditto the oxygen tank.”

Tom told the security man about his thoughts on the possible nature of the earth tremors and how the news of the other missing items had him thinking about a possible scenario.

“Wow, Tom,” Phil replied. “But how can you prove it?”

“Well, first thing is to get a team out to the earth blaster demo area to see if we can spot anything. After that, it may come down to Dad’s and my original idea of doing a dig down a mile or so to see if

we find any radiation.”

“But, Tom. If you did find radiation down there, that would mean that someone found a way to dig in under Enterprises, plant an atomic bomb, and detonate it. I really don’t like that... not at all!”

Tom invited Phil and any of his forensic investigators to join him an hour later. “Ask each person to check out and wear a basic anti-radiation suit. I’ll show up in a Tomasite- and Intertite-coated crew vehicle that we can all jump into if we find anything nasty out there.

Tom called his father telling him of the other missing items and Tom’s new theory about the nature of the explosion. His father agreed with him on every point.

“Want to come along to see what we find?” Tom asked.

“Son, I have about fifteen irons in more than a dozen fires right now. As long as you promise to take all safety precautions, I’ll let you and Phil’s team get on with it. Just fill me in tonight at dinner. Okay?”

Tom promised to do so, and then he headed to the motor pool to pick up the appropriate vehicle.

Before driving out to the demo site, Tom also stopped by two of his labs to pick up various instruments and test media, along with his custom-fitted anti-radiation suit.

He was in the process of unpacking his equipment when Phil and a team of two specialists arrived. One of the specialists, a heavy-set woman named Sonya Perkins, tapped him on the shoulder. “Let the goon squad hoist these out for you, Tom,” she said, here eyes twinkling behind her TomaQuartz faceplate.

Sonya and her partner, Peter Fitzwilliams, grabbed all the gear and carried it over to the spot Tom had decided to use as their test site. After concluding a call with Harlan Ames, Phil’s manager, Phil came over to the small group.

“What’s the drill, Tom?” he asked.

Tom looked up at him in amazement. “Did you just channel Bud, Phil? That’s the sort of pun he’d pop about now.”

“I’m sorry, Tom. Didn’t mean it to be a pun... but it *was* sort of good, wasn’t it?”

In spite of the seriousness of the situation, Tom couldn’t resist laughing. Sobering a bit, he asked Peter to pass him the Swift RadMeter he had brought. This device, a huge technological leap from old-fashioned Geiger counters, still worked on the same basic

principles but with a sensitivity of about 100X.

“I’m going to make an area sweep from right here,” he explained, “and then move about two hundred yards to over by the north wall for sweep two. Sweep three will be back to here and then 200 yards over that way to the east wall. The device then computes the location of any hot spots.”

Sweep one was completed five minutes later. Tom had the others wait while he headed over to the second sweep point. “Everyone should be just fine. If there is any radiation above normal background numbers the RadMeter will notify us. So, relax for ten or so.”

Completing the second sweep, Tom headed back past the waiting team and on to the final sweep point. Returning once again, he pressed a series of buttons on the device and set it on the ground.

“Two minutes and we’ll have a detailed map of the area and any radiation spots.” Since it was a moderately warm day and the suits seemed to amplify the heat, the four people went to Tom’s personnel carrier and had a quick drink of water. By the time they returned to the RadMeter it had finished its computations and had printed out a map of the area extending more than 500 feet from their position.

“Nothing,” he announced, looking at the print out. “That is, nothing other than the test strip inside of the unit. Looks like we’re safe here, but I’d like us to stay suited for the time being. We can swing the helmets back but keep them ready to pop back on in case of trouble.”

Looking around, Tom decided to head directly to the main demo dig area, an area about forty by forty feet and halfway to the corner where the north and east walls met.

By the time they had reached the site he knew his assumptions were probably true. Hundreds of tiny fragments, many recognizable as pieces from his model earth blaster, lay strewn around a hole in the center of the demo area. Burn marks on the pieces and around the hole gave Tom the final clues he needed.

“What in the world happened here, skipper?” Phil asked.

“Pending a couple tests my bet is that someone took the stolen earth blaster, along with the oxygen and acetylene gas cylinders and the sonic boom generator then came out here and dug down using the blaster. See how the hole is fairly smooth and just wide enough for the cylinder? I’ll bet that they lowered the cylinders down and then the sonic boom unit with some sort of power supply and a

timer. All they had to do was wait until it went off. The sonic booms would have ruptured both cylinders and the power leads for the blaster would have provided the spark.”

“Good thing it wasn’t hydrogen,” Sonya commented. “Like the explosion that destroyed the first Space Shuttle.”

“Ours wasn’t quite as bad but explosive all the same! And, before anybody asks why all of the trash is up here if the explosion was above the blaster, there would have been a tremendous amount of burning gases that went up the hole, but also quite a bit that would have gone down and past the now wrecked blaster. That would have had enough residual energy to turn around and blast back up the hole taking all these fragments with it. Look over there,” he said, pointing. “That twisted green piece could be part of the oxygen tank.”

“Why didn’t anyone see the explosion, Tom,” Peter asked.

“My guess is that the O₂ and acetylene didn’t get the chance to mix thoroughly enough to support a huge explosion. Since it happened a mile or so deep, it had burned itself out before getting to the surface. Boom and shake, but no flame or plumes of smoke,” Tom explained.

“So, we have a saboteur in Enterprises, don’t we,” Phil stated.

Tom concurred, but then said, “This isn’t just sabotage, Phil. This is more like a terrorist act!”

They continued to discuss the incident while Sonya and Peter collected samples of the debris, then took measurements and soil samples to test for traces of any explosive residue.

Tom asked Phil and his team if they would bring back the equipment while he took their car and went back to his office. They agreed, so Tom left them to finish collecting evidence. Reaching the gleaming office building he parked the car and headed inside. The sidewalk whisked him down the corridor and right to the door of the reception area of the office.

Munford Trent looked up as he opened the door and said, “Your father would like a quick update on anything you found. He received a call from someone claiming to know of a terrorist plot against Enterprises and several other major scientific and manufacturing companies.”

“Tom,” the older inventor said when Tom reached him, “the FBI had a call from someone about an hour ago claiming to have overheard several Arabic-speaking individuals last evening at a

motel right here in Shopton. The caller claimed to have nothing to do with the explosion but said the men were conversing in an Arabic-sounding language, laughing about something, and then one of them switched to perfect English as said, 'It was easy getting a job there. Even easier to steal their precious devices and explode the gas.' What do you think?"

Tom told his father of the findings. "It bears everything out. I wish we had some way of telling who might be behind this and who our terrorist employee is."

"We'll turn everything over to Harlan. I've already told him to work with the FBI and get to the bottom of this. In the meantime, I suggested taking anyone with less than a full year of employment here off of any important projects. He said he'll take care of gathering the sixteen different development teams one at a time tomorrow explaining that it is a national security edict. He is going to have multiple video cameras in the room watching everyone's face."

"Can we do that?"

"We can, and we must. Harlan believes that if our terrorist is still at Enterprises—and he says that all employees are showing up for work even after the explosion—that person will probably have a different body language and will most likely depart Enterprises right after the meeting. Anyone like that will be tailed by FBI teams."

The next morning Tom dropped by the Security offices and sat down with Phil Radnor at the bank of video screens. Harlan was informing a group, the third of the day, of the security measures. Most simply nodded their heads understanding that this didn't affect them but one person Tom did not recognize raised his hand and asked, "I'm right in the middle of a delicate part of our project and have only been here about forty-nine weeks. What happens to the project? Nobody else is working on my part."

Harlan asked the man to remain behind after the group left when he could answer the question directly to the individual involved.

Phil pointed at the third screen on the top row, "Look, Tom. See that man in the back row... the one looking down and trying to cover his face?"

Tom spotted the man.

"I'm sending his picture to the FBI agents. My bet is that he's going to head to the gate. He could be our man!"

Tom hoped that it could be that easy, but had reservations about

the Security man's assertions. He thanked Phil and headed out of the building. Looking toward the next building where the meetings were taking place, he saw the suspect man from the video screen come out of a side door, look furtively around and then head straight for the main gate and the employees entrance.

Tom cut diagonally across the tarmac hoping to head off the man. They both arrived at the gate simultaneously. Tom hailed the man who turned and faced Tom like a trapped animal. Screaming a slew of Arabic words, the man pulled a switchblade knife from his pocket, opened the blade and charged at Tom.

He got within five feet of the inventor when he stiffened, screamed in pain and crumpled to the ground.

Directly behind him stood the security guard, one of the Swift impulse weapons in his hand.

As the attacker writhed on the ground, he holstered the weapon, stepped forward and handcuffed the would-be assassin. Only then did he turn to Tom. "You all right, Mister Swift?"

Tom recognized the guard as a man only two years older than himself, a senior at Shopton High when Tom was technically a sophomore but graduating two years early. "Thanks, Davey. You were really on the ball!"

The young guard blushed a little then stated, "Mister Ames has us on high alert. Be on the lookout of anyone acting strangely, he said."

"Well," said Tom, "you may have just saved my life as well as many others. This man is suspected to be a terrorist planted at Enterprises. Oh, and please call me Tom. Mister Swift is married to my mother." Tom grinned at the guard.

Harlan Ames and Phil Radnor, both alerted by the second gate guard came running up.

"What's going on, Tom?" Harlan panted. "It isn't your job to put yourself in harm's way!"

Looking chastened, Tom said. "I'm sorry, Harlan. When I left your offices I saw this guy, one that Phil had pointed out, and wanted a better look at him. Guess I got a little zealous and too close."

The terrorist began to stir and recommenced his ranting. Harlan and Phil each grabbed an arm and hauled the man to his feet. He glared at them with hate in his eyes.

"Who are you and who do you work with?" Ames demanded.

The suspect only spat at him. Harlan twisted out of the way and the man jerked free of Phil's grasp. He only made it two steps before Danny again used the e-gun on him. He crashed, face down, onto the tarmac.

"Guess he goes with the FBI. Let them put up with the spitting," Harlan declared. They dragged the unconscious man off and toward the Security building.

Tom again thanked the guard for his actions then he watched as a pair of black sedans passed through the gates and drove to the security building.

Several hours later Tom received a call from Harlan. "Guess what, skipper. Our terrorist has ties with a wing of the Afghan Liberation Front. He is fairly inexperienced and had been led to believe that we would torture him almost to death if we caught him. He was so frightened that he started spilling the beans after only a few minutes at the FBI offices.

He went on to tell Tom about several other things they had discovered from his statements. It turned out that another Swift employee was also involved. Someone who had been with the company more than three years but who had recently converted to Islam. Harlan said he had the other man taken into custody until they could figure out his level of guilt.

The other thing the FBI had found out was that the earth blaster explosion was only a test. A group of terrorists was waiting to try digging a hole from one side of the Potomac River, from the basement of a building and under the water until it reached a position below the White House. An explosive device, possibly a 'dirty' bomb would be moved into position and exploded one night when the president was due to hold a huge diplomatic party. More than a hundred dignitaries and foreign officials would be potential victims.

"How would they dig the hole? They destroyed the earth blaster," Tom stated.

"I don't think they had that one all thought out. They destroyed the very piece of equipment that they needed to complete their heinous scheme!"

"Do they think we are going to have more problems? Do you?"

Pausing just a moment, Ames replied, "We should place a hiring freeze on all departments. Same goes for temp workers. Phil and I will go back through employee records to see who we have hired in the past ten to twelve months, where they have been assigned and

what projects they have access to.”

Tom and Harlan talked for a few minutes regarding the strategy for dealing with any suspect employees, then he hung up.

He really hated hearing about any employee, whether a new hire that had slipped through the background checks, or worse yet a trusted long-time employee that, for whatever reasons, had decided to turn against the Swifts. It had happened in the past; Tom was sure, and saddened, that it would happen in the future.

He sat on his stool thinking the matter over, so engrossed that the gentle creak of his door being opened almost didn't register. Too late, he realized that someone was in his office.

Turning quickly he just managed to duck as a masked man swung an aluminum bar *at his head*.

CHAPTER 8 /

WATER, WATER EVERYWHERE

TOM WAS ONLY marginally successful at dodging the attack. The bar grazed his right temple and slammed into his shoulder. The pain felt like an explosion and temporarily disabled his entire right arm.

Doubled over in pain, Tom found himself facing his attacker. Without hesitation he drove his head forward into the midriff of the unknown assailant. The blow knocked the air out of his attacker, but it also wrenched Tom's shoulder and the pain buckled his knees.

Both of them were lying on the floor just a few feet from one another. Tom knew that his arms were practically useless so he used his legs to push off from his desk and rotated his entire body around so that his feet were near the other person's head. With a vicious kick, Tom sent his attacker's head snapping back, slamming it into the leg of his workbench.

The kick spun Tom back around so that he was now facing the person who had obviously come into the office to injure or even to kill him. Tom could see blood coming from the ski mask the other person wore. The kick had also dislodged the mask pulling it up above the man's chin. A black van dyke-style beard was visible underneath.

As that detail registered with him, Tom's tortured shoulder got the better of him. The pain disappeared as the young inventor slipped into unconsciousness.

The next thing Tom knew was that his office was full of people. Chow was kneeling next to the youth chaffing his left wrist, Bud was next to him and Harlan Ames was kneeling next to the attacker. But there were at least five other people in the office that Tom didn't immediately recognize.

A noise at the door indicated the appearance of another person. Everyone moved aside as Doc Simpson rushed in, medical bag at the ready. He started to attend to Tom when Harlan said, "I think you need to look at this man first, Doc. Sorry, Tom, but you fought back maybe a bit too well."

Bud and Chow helped Tom to sit up. Chow took off his bandanna handkerchief and expertly tied it into a sling to help Tom keep his right arm steady. He also took an offered handkerchief from one of the people Tom couldn't place and held it to Tom's head to stop the

trickle of blood from his scalp.

Bud asked one of the other people to get Tom a drink of water. It felt cold and soothing to the young man, and he was soon able to talk. He suddenly remembered who the strangers were. These were scientists on a governmental exchange program from Sweden and The Netherlands. They worked just down and across the hall. He had only met them briefly when they first arrived several weeks earlier. He raised his voice to thank them as best he could.

“Thanks, everyone. I was just sitting here and he snuck up on me. Clobbered me with that pipe over there pretty good.” He slightly flexed his shoulder to point and was rewarded with a fiery streak of pain extending all the way down his arm and up into his head.

Bud, Chow and a woman scientist from the lab down the hall attended to Tom while Doc Simpson worked on the attacker. He managed to stop the flow of blood from the large gash in the man’s temple, but had been unable to bring him back to consciousness. A medical team arrived and took the man away on a gurney. Then, Doc finally turned to Tom.

“I’m pretty sure that I can see what happened from that cut over your right ear and the dislocated shoulder. Did you turn around just in time to get hit?”

Smiling through the pain, Tom replied, “That’s just about it, Doc.”

“Good thing that was a lightweight bar. If it had been steel or cast iron it would have shattered the shoulder and collarbone. Probably would have taken off a chunk of your scalp and your ear as well.” The young medico gave Tom an injection of painkiller and then told his young patient about his fears for the attacker’s state.

“You caved in his skull over the temple. He lost a lot of blood, possibly too much!”

Tom was both dismayed yet somehow gratified to hear that the man has sustained considerable injuries. “Will he recover?” he asked.

“Only time will tell, Tom,” the doctor had said. “Hmm. You’ve got a dislocated shoulder that will have to be put back.”

“You did good, Tom,” Harlan Ames said. “Two attacks in one day. My guess is that your latest attacker is the accomplice of the terrorist we caught earlier... well, that you and the guard captured, that is.”

Bud helped Doc Simpson and Harlan to hold Tom while his shoulder was eased back into position. The painkiller did a good job,

but Tom still almost passed out as the arm snapped back into its socket.

He was transported to the infirmary for x-rays and a proper wrapping to immobilize the arm. The young doctor viewed the x-ray films and declared that Tom would be tightly bandaged for the next 48 hours, but that the arm and shoulder would be good as new, but sore, within a few days.

“What about my attacker, Doc?” Tom inquired.

“We’ve transported him to Shopton General. They have a hyperbaric chamber they can put him in. They’ll pump in pure oxygen and bring the pressure up to about two atmospheres. That will drive O₂ into his tissues and possibly help him. That blood loss meant loss of oxygen to the brain, Tom, but Harlan was correct. You did good. You were just about unconscious from the pain and had only limited means to defend yourself. Don’t worry.”

An hour later Tom was released from the infirmary and was sent home to rest. At the Swift home, Tom’s mother and sister puttered around fixing Tom some sandwiches, getting him an iced tea, fluffing pillows and generally being mother hens. Finally, Tom said, “Mom! San! You’re worse than Chow. I’m okay. Tired, sore, overfed, but okay.” Seeing the disappointment in their faces, he added, “but I do really want to thank you two. I couldn’t hope for better nurses.”

With a mischievous grin, Sandy replied, “I’ll bet you would drop us like a dirty shirt if Bashi were here to take care of you.”

Tom blushed but said nothing. Inside he knew that she was right. His thoughts kept turning to the beautiful Pakistani girl these past few weeks.

Tom’s dad entered the room interrupting Tom’s thoughts. “Hello, Son. How are you feeling?”

“Okay, I guess. I can’t move my arm because of this bandage Doc wrangled me into, but I can feel my fingers and the pain has really dropped in the last hour.”

His father knew that Tom’s mind was on his attacker and that man’s condition. He told Tom, “They won’t know anything about the attacker for at least seventy-two hours. He’s in an induced coma so that he will keep absolutely still in the chamber. I understand from Doctor Moore that they have had a fair amount of success with this treatment and that he has seen worse come in on a stretcher and walk out a week or two later.”

“I didn’t have to kick him so hard,” Tom bemoaned.

“But you did, Tom. You couldn’t know whether he might pick up that bar and beat you to death. I’m proud of you. You protected yourself and probably kept Swift Enterprises from suffering untold damages.”

They spoke for another few minutes, then they heard the front doorbell ring.

“Hmm? Wonder who that might be,” Damon Swift asked Tom with a twinkle in his eyes.

His visitor was Bashalli. She seated herself on the side of Tom’s bed holding his uninjured hand and talking to him in soothing tones for more than four hours. Mrs. Swift brought the two their dinners on trays, then withdrew leaving them to continue talking. “Best medicine in the world,” she had muttered happily to herself as she returned to the kitchen.

The following day, Tom stayed at home working on some design elements of his latest invention from his terminal in his room.

Now, alone with his designs the young inventor put all other thought aside while he tackled one of the trickier issues of power usage and control of the Revivicator.

He ate the lunch Sandy had brought up without noticing what it was.

By evening, he had finished with the power problem and was about to embark on a different matter when there was a gentle knock on his door.

“Come on in,” he called out.

The door opened to reveal Bashalli dressed in a fetching blue sweater and black slacks. She smiled and crossed over to the desk where Tom had been sitting all day. Looking down at his right side she laughed when she noticed that the inventor had set up a low table made up of books topped with a piece of foam-core board to make a place for his mouse.

Tom glanced down at where she was looking and said, “I couldn’t get my arm up to use the mouse on the desk.” He grinned.

“An inventing mother, Thomas?”

“Um, mother of invention, actually, Bash, but, yes.” They both laughed.

“I can only stay a few minutes. My family is going out to dinner this evening, and I must not be late. I believe that I am going to get a family-sized lecture about the amount of time I spend with you

and Sandy.” Seeing a worried look cross Tom’s face, she hastily added, “but it is not to worry. They want me to be happy, so they will understand when I tell them that you and Sandy are my two closest friends. Of course, that will raise questions about a teenage boy and teenage girl being merely ‘friends’ and could it possibly mean more or is it just an American thing, or...”

She trailed off as Tom raised his left hand and placed his index finger to his mouth.

Giggling, she continued, “but it is perfectly okay I think. Anyway, I will have a very nice dinner at a very chic French restaurant. I may bring you a... a...”

“Doggie bag,” Tom guessed.

“That sounds so much better than a ‘bag of doggies’.”

She leaned over and gently brushed her lips across his forehead, then said goodbye and departed.

* * * * *

“Okay, where’s the giant S to go along with that massive T,” inquired Bud as he walked up to Tom in the Barn a few days later. The Barn was a large enclosed hangar where some of the full-sized mock-ups of Swift’s larger inventions were constructed. Tom and a team of three of Enterprises mechanical engineers had been working on the device Bud saw in front of him.

Looking up at the at the 23 yard tall column of stainless steel, Tom smiled and replied, “I’ve been trying to figure out how to make the thing work if shaped like a B, but the physics just aren’t on your side, Bud.”

“I’ll bite,” Bud said. “What is it? Some sort of antenna or sculpture or high-energy pulsed laser super cannon?”

Tom paused to think about that last one, then answered, “Sorry. None of the above, and you’ve got to stop watching so much science fiction on TV. Super cannon?”

Grinning, Bud said, “If you’re not going to put big labels on these things, you have to expect a few wild guesses!”

“Well, like I said, it’s none of those. You remember how Dad and I were asked by that African tribal representative to help with their drought problems?”

“Sure.”

“We hoped that some sort of fix to the global warming might help out, but it looks like it’s going to be too slow to be of any help to

them. Not just the people of that nation. There are hundreds of millions of people that don't have adequate water, or if they have a source, it could be contaminated."

"Fine. How does this monstrosity help?" Bud and Tom both looked upward starting at the 15 foot cube at the bottom, topped by 5-foot wide gleaming stainless steel tube that terminated in another, smaller cube topped with an array of solar cells forming the cross-bar of a giant T.

"From top to bottom, or bottom to top?"

"Please. Just start with what it is, then break it down for me," Bud replied.

"It is a moisture concentrator."

"It makes dehydrated water... just add water," Bud joshed.

With a perfectly straight face, Tom said, "Yes. That's exactly it!"

Seeing Bud go pop-eyed in amazement, Tom couldn't hold back the laughter. "Sorry, Bud. I couldn't help it. In truth, it is a device to draw moisture out of the air, collect, purify and then dispense it."

"Wow! All that it just that one thing?"

"Sure. It is totally self-contained. Up there," he said, pointing at the "T" array, "is a bank of solar cells that will power it by day and store off enough extra energy to run it all night long. Just underneath is the solar battery compartment, computer, and the motors to keep the array aimed at the best angle during the day to receive the most sun."

Furrowing his brow, Bud asked, "I've been in the jungle over in Africa with you, genius boy, and I seem to remember that a lot of the jungle is taller than this thing. Isn't that going to interfere with the sunlight?"

"It would, except the array actually raises on a pneumatic shaft coming up through the middle of the tube. That way, we can get the solar panels up above about ninety percent of the typical jungle growth. In the taller places, we might have to do some judicious tree trimming, at least at the tops of the nearest trees."

Tom went on to explain that guy wires would be used to stabilize the array once raised to its proper height. These would be attached to the jungle floor using self-locking ground anchors capable of withstanding thousands of pounds of force.

He described how the unit worked.

"It features a high-power cooling compressor, like an air

conditioner on steroids, that pumps super-cold fluid up and around the entire stainless steel column chilling the surface to about 36 degrees Fahrenheit, twenty-four hours a day. You know what happens to a glass of ice tea on a warm day, don't you?"

"Yeah. Wet-fingers city. It seems like the glass is leaking all over, but it's just condensation, correct?"

"A gold star for the man. Yes. And all that condensation runs down and onto the table or napkin. In the case of this machine, it runs down and into tens-of-thousands of micro-holes near the bottom. Although they filter out debris, that moisture will contain anything that might have attached itself to the water droplets. You know how every drop of rain builds up around a micro-sized piece of dust?"

Bud nodded.

"Same here. So, in the upper part of the base cube the water is cleaned through an osmosis process that won't require more than about two percent of the water collected to keep it cleaned out. It then is filtered and exposed to ultraviolet light to kill any micro-organisms. Finally, it goes into the four hundred gallon tank in the very bottom where it waits for people to draw it off into jugs or barrels."

"How much water does it make a day?" asked Bud.

"A lot depends on the location, but most of the central African jungle area, at least what's not too close to the Sahara, has enough humidity to let this unit collect around seven hundred gallons each twenty-four hours. And, unlike people in countries like the USA, the tribal people make do with less than seven gallons of water per day per person."

"So this could serve a hundred people, then?"

"Right now. But I hope that the final units will be able to supply clean water for at least a hundred fifty people. In theory, just increasing the diameter of the column by three inches would do that, but the increase in area will mean that the current compressor and heat pump and even the solar array would be too small to be dependable over long periods of time, like months or even years," the inventor said sadly.

"Cheer up. You'll crack it. You always do," said Bud.

Tom nodded, thanked his friend and then asked him to run a quick errand into Shopton.

"I've been meaning to pick up a small figurine for Bash down at

Richards' Department Store. It is a small carved jade piece of what looks like a gnome, but I have been told that it is supposed to be a good luck sprite from Siam."

"On my way right now. Will I have enough pocket change for this?" asked Bud.

"Paid for on the Internet this morning. Just needs to be picked up. I'll call them in a few minutes to tell that it's OK for you to take it."

Bud left and Tom was soon deep in thought about increasing the capacity of his invention. Several possible solutions came to mind, only to be dismissed as either unfeasible or not enough to be worthwhile.

When he finally looked up at the clock, he saw that more than two hours had passed by. Snapping his fingers, he remembered he should have called the department store about Bud. Looking back at the clock, Tom became worried.

Why hadn't Bud or the store called when Tom forgot to? Even if the store had no problems giving the gift to Bud, where could he be?

Tom activated his TeleVoc pin but received no response from Bud. A call to the boy's cell phone only transferred to his voice mailbox.

Before calling the police, Tom tried Bud's number at his apartment. No answer.

Now, beginning to feel panic rising, Tom called Harlan Ames at Security.

"Tom," Harlan said. "I was just going to call you. We just received a computer-generated phone call. *Bud's been kidnapped!*"

CHAPTER 9 /

HOPE #2

“WHO WAS IT?” demanded Tom. “What do they hope to accomplish by taking Bud?”

The security chief answered, “The message simply said, ‘Swifts. We have your young man. If you want him back alive you will halt your plans aimed at spying on our South Pole base! Remove your spy devices and destroy all others in your inventory!’ and that was it. It repeated once more then the connection cut off. We’ve tried to get a trace on it, but even with the phone company’s assistance it is going to take a couple hours. Maybe more, because the call was just under the necessary thirty-seconds it takes to get a good trace.”

Dismayed, Tom requested he be kept abreast of anything that happens. Ames agreed, adding that there should be another call coming since the first one contained neither details about how to verify that Swift Enterprises had done what the kidnappers demanded, nor how or where they would get Bud back.

Tom called his father and related the details he knew. “Oh my, Tom,” his father said. “This must be the work of whoever it was that attacked the *Sky Queen*. I don’t know how they might think that your Revivicators are some type of spy device. Both the G-20 committee and our own PR department have released detailed explanations of what we are hoping to accomplish.”

“Dad? Could you contact one of your friends in the State Department to see if they think this could be one of our past enemies, like that Sentimentalists organization of Brungarian rebels or even Kranjovia?”

The older Swift promised to do exactly that after he concluded another matter, so Tom left and headed toward the underground hangar where he kept his electronics lab. In the back of his mind he believed that he had to address the security issue, fast. Both for the protection of all the Swift facilities, like Enterprises, and for the safety and security of all their employees.

As he entered the lab, his TeleVoc activated. Ames said, “Tom. We just heard from Bud’s captors. This time it was a human on the other end. A slight accent that might give us a clue to his possible nationality.”

“What about Bud, Harlan?”

“Let me play back the recording... you decide.” With that there

was a slight click as the TeleVoc signal was patched into the computer network and the recorded conversation began playing.

“You Swifts have been trying to ruin everything for us! You are lackey spies of your government. We know this to be truth. You will not convince us otherwise.”

Harlan’s voice cut in at that point, “What is it that you want? Where is Bud Barclay? You know that if you harm him not only will the might of Swift Enterprises hunt you down, but the entire free world will be right behind us. Now, where is Bud Barclay?”

“Your young Barclay is safe and nearby. He is currently unharmed although he is sleeping off the effects of a minor nerve agent we administered to him so that he could be captured without struggling.”

“Now you listen...” Harlan began, only to be cut off.

“NO! You listen! Your spy devices circling near our base in the Antarctic are an invasion of our sovereign rights and property. Either all your devices are removed... no... exploded in the air so that we can witness their destruction, and within five hours, or your Mr. Barclay will be returned to you in several small boxes!”

“Nobody can get there in five hours,” Ames exclaimed. “Even if we wanted to give in to your demands, it would take more than twelve hours for us to get there, and that doesn’t even allow for time to figure out how to destroy them. We do not carry missiles or guns on our aircraft. All of our missions are peaceful!”

After a brief pause, he continued, “You have to give us at least 24 hours. And, we may need to call in the U.S. Air Force in order to destroy our ozone generator.”

“Bahh! Ozone? No. It is spying on our base and we will not tolerate it! And, *no* U.S. military. You must destroy the spy devices yourselves. We will give you your 24 hours, but fail after that and we promise that young Barclay will only be the first of many to die!” With that, the connection was severed.

Tom took a breath and spoke. “What do we do, Harlan? We’ve only got the one OzoNut down there. I could fly down there, recapture it and release some sort of incendiary device that we could set off to make it look like the prototype is being destroyed.”

“That might be a solution, Tom,” the security chief admitted. Tom could hear another phone ring in Harlan’s office.

He could hear him punching a series of numbers into another phone. When it was answered, a muffled voice spoke for several

seconds and then stopped. Ames let out a whoop and practically shouted into the receiver, “YES! Radnor? You’re a godsend. Get that info to the FBI and the local police pronto, and then meet me at the motor pool in five minutes. I want to be there when they swoop in.”

Harlan’s said to Tom, “In case you couldn’t make that out, Rad says they’ve traced the call. Whoever these people are, their call came from a small motel on the other side of Lake Carlopa. Lots of older vacation homes out there and only one road. I’m on my way out the door right now.”

“Hang on. I’m coming, too!” Tom stated.

“Sorry, skipper. If this goes even a little wrong I can’t risk having you in harm’s way, or ever feeling that you might have done something that got Bud hurt. This one needs to hang on my shoulders.”

“Harlan. At least let me take up the Skeeter and watch the lakefront and surrounding area in case they try to escape through the woods. If I run in quiet mode, they will never know I’m a couple thousand feet over their heads.”

There was a lengthy pause and then the security chief said, “OK. But promise that you will leave everything physical to the experts. All right?”

Tom promised then cut the connection and ran from the lab and out of the building. The hangar where the Skeeter was normally stowed when not in the *Flying Queen* was just a few hundred yards away. He jumped into the cockpit, did a quick but thorough preflight check and then fired up the jet thrusters in the rotor tips. As he prepared to take off he radioed the control tower about his intentions asking them to relay the info to his father.

The Skeeter’s rotor picked up speed and the little craft practically jumped into the air.

Tom arrived over the probable location within minutes and went into a hover. He grabbed a pair of electronic binoculars, capable of 10X optical and a further 30X electronic zoom. He focused the glasses to ground level and began scanning a wide area beneath his craft. Very shortly he spotted several cars—some with police lights and others obviously unmarked—heading toward a small cottage in an overgrown clearing. In the lead was Harlan’s 4x4 with “TSE” painted on the roof.

The building looked as if it hadn’t been used in years, yet Tom had the feeling that this must be the place.

He radioed to the cars using a special police frequency. "I'm pretty sure I've spotted the shack. If you can see me, it is right below my position."

Ames radioed that he could, indeed, see Tom's helicopter. "That's where we're heading. Please just keep an eye peeled out for anybody trying to escape on foot."

Tom set the radio receiver aside and looked back through the binoculars. He felt the blood drain from his face as he found himself looking straight down at the upturned face of a dark-haired man with a shoulder-mounted anti-aircraft weapon.

With an evil grin that would haunt Tom for weeks, he squeezed the trigger and the deadly rocket headed directly at Tom, training blue-gray smoke in its wake.

Tom immediately grabbed the controls and swung the tiny helicopter around. At the same time he realized that the only thing he could do was to try to use the craft's great lifting thrust to carry him sideways and out of harm's way.

He swung the copter 180 degrees and put the craft in a nose-down position. He also pushed down the collective dropping power from the rotors and shoved in the left pedal.

The result was that the little craft began dropping and tipped over onto its left side. He yanked back on the collective giving full throttle to the jet-tipped rotors just in time to send the copter sliding more than fifty feet to the side. The missile flashed under the sideways craft with just a few feet to spare.

Relieved to be alive, Tom now realized that he was in great peril if he could not right the little helicopter. Keeping full power to the rotors, he pushed the control yoke hard to the right and pulled back. Almost immediately the little copter righted itself and began struggling to regain height. He looked down through the nose of the craft and could see that he now had fewer than 50 feet before he would crash. "Come on... come on," he begged the craft. As if sensing its pilot's plight the little helicopter stopped its descent and leveled out just a dozen feet above the surface of the lake.

"Swift? Mr. Swift? Are your okay?" came a desperate voice of a sheriff's deputy over the radio.

Tom took a few second to bring the craft to rest on the sandy beach about fifty feet ahead then he answered, "Yeah. I'm okay. Did you get that guy who shot at me?"

"We did. He ran to the porch of the cottage and grabbed another

of those launchers. The Captain ordered him to drop it but he pointed it at our cars. We opened fire and hit him.”

“What about Bud?” Tom almost yelled.

“Looks like there are a couple others in there with him. They’re swearing to kill him if we don’t give them a get-away car. The Chief wants to get a negotiator here to deal with them.”

Tom had an idea. “Tell them that they almost shot down the only thing you can get for them to leave in. If they promise to bring Bud out and let him go, I’ll bring the helo over to their clearing. We get Bud, they get the helicopter.”

Harlan’s voice broke in, “It might work, skipper. We’ll see what they say about it.”

It took more than ten minute before the radio crackled to life. Tom jumped in his seat and grabbed the handset. “Yes?”

“Tom? This is Captain Rock. Here’s the deal. They will allow the helo to come to the clearing in front of the shack only as long as they can see us leave the area and see that the pilot isn’t armed. We can’t ensure that they will release Bud even if they get the helo. Any ideas?”

Tom had a notion that he could get Bud back plus keep the kidnappers from escaping. He briefly told the Police Captain his plans and then revved up the rotors of the Skeeter. He took off and headed out over Lake Carlopa. Turning back he set a course for the clearing keeping just above tree level. He knew that no hand-held rocket could arm itself in less than 400 feet, so his approach would mean that any launched weapon would not be able to explode.

Upon reaching the clearing he picked up a new handset. Clicking on the set he cleared his throat and said, “This is the escape helicopter. Do not shoot!” His words were amplified many times and broadcast from a pair of loudspeakers in the bottom of the aircraft.

“If you come out with Bud Barclay and we can verify that you are not carrying weapons I will land the helo and get out. You will then release your hostage and allow him to exit the area before I will turn over the controls to you. Do you understand? If so, toss out some article of clothing into the area in front of your cabin.”

Several minutes went by then Tom saw a familiar T-shirt that had been flung from the area under the porch overhang. It was one of Bud’s favorite shirts. Tom was certain that Bud must be in the cabin.

“Okay,” he stated into the microphone. “If you all come out, including your hostage, and show me that you don’t have any weapons I will land.”

Appearing to have been pushed, Bud stumbled out from under the porch overhang and into the clearing in front of the run-down building. He looked up at Tom’s helicopter, smiled and then turned so that Tom could see that his hands were bound. Two rough-looking men slowly came out behind him, each looking around to see any tell-tale signs of the police

“Untie his hands. The authorities have pulled back. I will land as soon as he has left the clearing... over to your right, please.”

Bud’s ropes were hastily cut and he moved his arms back around in front of his body. He rubbed his wrist and forearms as if trying to get blood flow going again. He looked at his captors and the one who appeared to be their leader nodded.

Tom brought the little helicopter down fifty feet away from the group.

Glancing back at Tom, Bud took off to his right. Within seconds he had disappeared into the thick undergrowth. Tom knew that the time had come to put his plan into full action. “Please step back onto your porch so that the rotor wash doesn’t injure you,” he said in the mic. The three looked at each other and then stepped back and under the overhang. “Just give Bud another ten seconds to get clear,” he muttered to himself.

He counted to five and then could see that the three men had picked up rifles and were in the process of raising them toward the small helicopter. Tom immediately pulled on full power and the Skeeter shot into the sky. He shoved the control yoke forward and quickly moved out of sight and range of their rifles.

He flew over four police cars that Bud had just reached. Grabbing the mic that had slipped down onto the floor, Tom said, “I’m going back up over their position to make sure they don’t get away. You can close in now. But they have at least three rifles between them and also the ground to air missile launcher.”

Bud gave Tom a thumbs up sign. With a big grin, Tom returned it and then set the Skeeter on a path back toward the cabin. He immediately saw that the cabin was in flames, smoke billowing out of the door and windows. He gained altitude, up to over 2,000 feet. Using his binoculars he could see the three men making a hasty retreat through the woods behind the cabin. He radioed the police giving them this information and then set out to follow the men.

“Yes! That’s what I like to see,” he sang out as he saw the men break out from the trees and into the waiting arms of a detachment of the local Sheriff’s department. They dropped their guns and raised their hands.

Elated, Tom radioed the Police asking them to take Bud to the Shopton Medical Center where he could be checked out.

Tom radioed for permission to use the hospital’s helo pad to land the Skeeter, explaining that he would then move is off the pad by hand so that it would not interfere with normal hospital flights.

Several hours later he and Bud took off from the hospital and headed back to Swift Enterprises.

“Jetz, Tom. You were great. I don’t know how I’m ever going to thank you for saving my life. Again!”

“I’d do it a dozen times a day for weeks on end, Bud,” Tom said. “You’re my best friend. I’d do it for Mom or Dad or San or Bash...” he sort of choked up mentioning Bashalli’s name.

Bud put a hand on Tom’s shoulder. No words were necessary. They both knew that Tom’s feeling for the vivacious Pakistani girl ran pretty deep.

Finally, Tom said, “Anyway. You’re back and the bad guys are behind bars. That’s all that matters... right?”

“Uh, Tom. They’re not all behind bars. There were six of them involved in this thing. Two young guys grabbed me and took me to that shack where the other four were waiting. Two of them took off. Their leader had a very thick accent. Somewhere from the Middle East, I guess. He had the full beard and headpiece, too.” He went on to describe some of the very little of their conversation that was conducted in English. “He took off an hour before you guys rescued me.”

“Then that leaves the man they shot and the two they captured,” Tom said.

As they landed at Enterprises, Tom said, “Let’s get right over to Harlan’s office and let him know the details. He’s going to need to get the FBI and the CIA and perhaps even the State Department involved. I don’t want to make general accusations based on anybody’s nationality, but this could be more terrorist action. I really don’t want us to become involved in that sort of thing!”

Upon hearing the story from Bud—and making a digital recording—Harlan contacted the State Department and the Department of Homeland Security forwarding them the audio file and asking them

to disseminate the report to any other agency they saw fit.

When, two days later, Bud ran into Phil Radnor in the Enterprises cafeteria, he inquired about any progress in the case.

“Your descriptions were spot on in at least two cases,” he replied. “The FBI captured the two younger men you described. Turns out they are illegal Djiboutian immigrants that are out to prove themselves. They claim that they took the job for about a grand each and were trying to impress someone they think is with a terrorist cell here on the East coast.”

“Those are some pretty nasty customers,” said Bud.

“Well, like I said, these two were just out to impress; they aren’t in that league, yet. And, thanks to you they are going to be trying to impress guys named Bubba in a Federal prison. You’ll have to testify, of course...”

“Sure, any time,” Bud interrupted.

“But they’ll go away for enough time that they won’t recognize their own mothers when they get out!”

Phil went on to tell Bud that the two captured suspects would need to be identified by Bud in a line-up to be held that afternoon. Bud agreed to meet Phil at his office about a half hour before they were due at the FBI.

What neither Phil or Bud knew was that the two criminals had both been captured with a photograph of Tom in their pockets.

These photos each featured a blood-red X drawn over the inventor’s face and a single word in Arabic. **الموت**

DEATH!

CHAPTER 10 /

PROMISED HELP

TOM SUPERVISED the loading of the *Sky Queen* with the first of the new water producing towers. Soon, it would be on its way to Magurro and to the worst drought-affected of the tribal villages. He also asked that the SwiftStorm, his ultrasonic cycloplane, be removed in favor of the Skeeter and Kangaroo Kub aircraft. He would need the Skeeter to do the lifting and delivery of the device and wanted the Kub in case they needed faster flight capability where the Flying Lab just wouldn't be able to go.

"Shore looks purty, all a'gleaming like that," Chow's voice said from behind Tom.

"It really does, Chow. Let's just hope that it works for those poor folks in Magurro."

"So, what 'cha calling that, Tom? The big, shiny water producin' thingy?"

"No. I haven't come up with a name yet. I keep toying with the different words in its function, but haven't had any brainstorm's."

"Wahl, lemme see. Tell old Chow what it does and I'll most likely think of somethin'," the old cook said.

"Okay. Here goes. Through thermal induction and surface chilling, air moisture, called humidity, is attracted to the shiny vertical cylinder where it adheres due to surface tension. As more and more collects, gravity forces it down the column into a collection tank where it is spin-separated from any solids, membrane filtered, ultra-violet light processed to destroy bacteria and finally added to a dispensing tank in an endless cycle." Seeing the paunchy cook scratching his head in puzzlement, Tom added, "It's sort of an electronic water bucket."

"If'n the water collects on the upright part and goes a'slidin' down to the bottom, and it's shaped like it is, why don't ya jest call it the Iced T... iced tea? Git it?" The roly-poly chef slapped his right knee and bent over double in laughter at his own wit.

Tom smiled. "Chow, old timer. You may have something there. But what would people think about me? The shape is the most effective one I could design for what it does. Not just because I like my first name."

"Sure. Some *could* figger' it like that..." Chow stood back up, "you

might see it that way too, I guess. Then how's 'bout callin' it the endless rain barrel? Mebbe ERB?"

"Chow? You've done it again. That's perfect. ERB, The Endless Rain Barrel it is!"

The cook clomped off, whistling a happy tune, proud to have been of service to the young man he considered like a son.

With the newly christened ERB aboard, all that remained was to stow away a newly-enhanced version of Tom's Skeeter aboard the *Sky Queen*. The enhanced version had slightly longer rotors and a higher-capacity jet nozzle at each rotor tip. This would provide a large increase in lifting power, power Tom was sure he would need in the jungles of Magurro to erect his water collecting apparatus.

Bud and the crew that would accompany Tom arrived a few moments later, each one of the 7-man team carrying suitcases full of multiple changes of clothing they knew to be necessary for working in the hot jungle.

On Tom's adventures in the Caves of Nuclear Fire, the men were continually needing to change out of sweat-soaked shirts caused by the intense heat. Instead of having to do laundry every night, a task that was shared by all aboard, it had been decided that future excursions into hot and/or humid areas would mean enough clothes for three changes per day for at least three days between washings. It would mean less 'down time' for crewmembers and a higher degree of comfort as well.

"Take off is in fifteen minutes, flyboy," Tom said to Bud. "You and Hank have the controls going over while Slim, Arv and I do equipment checks and finalize the plan of action for the installation."

"Sure, Tom, but you and I can't go aboard quite yet."

Tom, looking puzzled, asked, "Why not, Bud? I'm ready out here and you're here. What's to wait for?"

With a grin, Bud answered, "Well, there will be a pair of stowaways coming with us... with your dad's blessing I hasten to add."

Tom was about to ask when both boys heard the squeal of tires from one of the Swift Enterprise jeeps that were in constant use around the huge facility. Turning, Tom broke out in a wide grin.

Perched prettily in the back seats of the open-topped jeep were with sister, Sandy, and Bashalli. A pile of suitcases filled all the available front seat space almost not leaving room enough for the

driver, Phil Radnor.

“Hi, girls,” Tom exclaimed. “Are you really coming along with us?” He looked directly at Bash, knowing that her family’s beliefs were fairly strict about unchaperoned meetings.

“Sandra and your mother convinced my father that we would be accommodated in private quarters, far from the men and be protected by mister Winkler, a man my father holds in some high esteem for his great cooking skills, I might add.”

“Gee, this is great! Let’s go.” The final four climbed aboard the huge craft and were soon winging across the Atlantic Ocean on a course for the tiny nation of Magurro.

Although the *Sky Queen* was capable of greater speed, Tom wanted the trip to take eleven hours so that their arrival would occur at about 9:00 a.m. the following morning. He was aware that the tiny airport had no radar control, nor did it have any runway lighting system.

Everyone was encouraged to get at least 5-6 hours of rest on the trip, a difficult task as most had only been awake a few hours when the jet took off.

As they neared the western coast of the African continent, Tom took over the controls. He knew that their flight path would be circuitous from this point on. Several of the African nations they would normally pass over had no-fly rules for foreign aircraft, and at least one was on the CIA’s ‘avoid’ list. Nevertheless, the *Sky Queen* was less than 100 miles from Magurro at 8:50 a.m.

Tom radioed the controller at the airport at Masubbi Airport asking for both permission to enter Magurro airspace as well as for any landing instructions.

The controller, identifying himself as Felix, provided the basic landing instructions but had to excuse himself so that he might contact the nation’s president for the landing permission.

When he came back on the radio he stated, “You have our president’s permission and his gratitude for your arrival and landing. We are pleased to offer you a position directly next to our terminal which is also our control office and my home.”

Tom explained about the hot jet thrusters that the *Sky Queen* used for vertical landing and take-off and the potential damage they could do to a nearby structure. He asked about the length of the runway.

“Our main runway, which is to say our only runway, is just under

two thousand meters. I believe for your measurements I calculated it to be one mile plus almost three American football fields in length. Is that sufficient for your airplane?”

Tom decided to approach as slowly as forward flight would allow, perhaps using the jet lifters only for slight lift to let the ship land in about two-thirds of its normal unassisted landing length. “Yes, thank you very much. We will be at your field in about ten minutes.”

“Would it be possible for you to circle our capital once or twice so that our people who cannot be allowed at the airport might see your plane? They are all very curious, but our president realizes that some might try to go too near the landing runway for a closer look at your airplane, and would probably interfere with your landing.”

Tom agreed, setting course for the capital city, Masubbi. He opted for a slow circling of the city at an altitude of 3,000 feet, high enough to use the jet lifters but not so low as to have them felt on the ground. Finally, he flew the plane to a position two miles from the runway and began his final approach.

“Landing on your runway... uh... it doesn’t have a number designation. Hmm. Well, landing on your runway in forty-five seconds.”

“Your magnificent jet plane is a wonderful sight. I look forward to seeing you on the ground. Please feel free to taxi as close to our terminal as you feel safe.”

The *Sky Queen* came in at less than 150 knots, below its normal stall speed of 182 knots. A low setting of the jet thrusters helped to keep the plane aloft and controllable until she was directly over the end of the runway. At that point, Tom reduced their power and allowed the big jet to settle onto the tarmac.

He noticed how badly the asphalt surface had deteriorated over the years and was really nothing more than a series of asphalt chunks held together more by memory than by anything else. He made a mental note to bring some sort of paving equipment on a future visit to totally resurface the runway.

As the crew of the *Queen* began to disembark, Tom spotted the man he had met in Germany, the emissary from Magurro, now resplendent in ceremonial robes covered with colorful, if faded slightly with time, feathers and shiny stones. He walked up to the man offering his hand. Another man, smaller and wirier than the first came hurrying up and positioned himself between the two.

“Mister Tom Swift?” he asked. Tom nodded. “May I have the pleasure of introducing you to our great and grand national ruler,

President Latumba!”

The president looked at Tom with a smile and extended his hand to Tom’s. “It is with great pleasure that I welcome you to our small, friendly but crumbling nation. Thank you for coming,” he added humbly.

At a momentary loss for words, Tom finally spoke, “Mister President. I didn’t know... I mean, you didn’t indicate... that is—”

Seeing Tom’s discomfort, President Latumba said, “I was traveling incognito. Not even the government of Germany knew of my, should I say, position? I felt that my only hope was to try to appeal directly to the G-20 environmental people. Imagine my pleasure and surprise when I saw you and your father. Is he with you?”

“Not on this trip. He will come over on a later trip once we determine whether my solution to your water issue actual works.”

The president motioned Tom’s group to follow him. Outside of the terminal Tom asked that Slim Davis and two other crew members stay with the *Sky Queen* for the first few hours. He also asked Slim to provide their controller, Felix, with a personal tour of the craft. Felix’s eyes widened and he looked for approval from the president who immediately nodded his agreement.

Tom, the president, Sandy, Bashalli and Bud climbed into President Latumba’s limousine, an aging Rolls Royce with balding tires and a missing driver’s door. The others were given directions and started walking the four blocks.

At the presidential residence they were provided with a type of fruit that had been hollowed out and the pulp mashed along with some water to provide a tart but satisfying beverage. President Latumba got directly to the point.

“I received your communication two days ago regarding your water generating device. You can imagine how anxious I am to see that it works and then to have you transport it to one of our most needy villages. When might you have it working?” he inquired, a hint of pleading noticeable in his voice.

Tom replied, “We will return to our jet in a short while and prepare it. I believe that it will work better in an area where the jungle can surround it rather than out on the hot tarmac of your airport. Do you know of a suitable location? I can offer to take you up in our helicopter to check out the surrounding areas if you wish.

Eyes widening, the president replied, “Oh, I would most certainly

like to do that. Yes. I have at least three positions in mind, but you should see them and chose the best among them. When might we begin?"

"Right away. If permitted, it would be best if you were to wear a less bulky garment. We would gladly provide you with one if needed," Tom said.

The president assured Tom that he would change into a more suitable garment and excused himself

"Wow, Tom. I don't want our hosts to hear this, but this place is really in bad shape," Bud whispered.

"Yeah. It is, and that's very sad. Probably if they just can get ahead of the drought thing, and perhaps with a little help from the outside, they could live a better life."

He told Bud, Sandy and Bashalli of his plans to offer to resurface the airport and even to work to pave roads from the various villages to the capital. "That way, people could travel here with any surplus goods to trade or sell and to buy needed supplies. I think Dad might agree to even provide several of our atomicar trucks to help them out. They should be able to make even the longest trip in less than an hour."

As the boys continued to discuss possible aid to Magurro, the president re-entered the room. He was wearing a one-piece work suit made of bright green cotton. It looked almost new.

Shielding his eyes, Bud said, "That's something Chow would love!" Sensing that he might have offended, Bud lowered his hands and said, "Mister President, I didn't mean anything rude. We just have a member of our crew, our cook, actually, who loves bright colors. He would appreciate your outfit for sure."

Smiling, the ruler nodded. "Then I will see that he has one before you all depart. I will have my assistant go to the airport with us and take measurements. We used to dye our garments using red flowers and green plant dyes, but we recently discovered a mineral that can be powdered, mixed with the sap of a pulverized weed that grows nearby, and then can be soaked into fabric. It never seems to fade. I wear this at least four days a week and have done so for more than three years. It is still as bright as it was the day I first put it on," he stated proudly.

Tom looked at Bud and then back at the president. "Sir? If that mineral dye is something you have in abundance, then perhaps it is something you might sell or trade with our country to bring in money and other things."

“Our communication with the outside world is primitive, and we have no trade delegation to send anywhere, even if we had the necessary aircraft or money to do so.”

“Swift Enterprises would be proud to help you, sir. That is, if you wish it.”

On the way back to the airport they continued to discuss the matter along with Tom’s suggestion of the airport and road work he would offer to ‘take on’ free of charge to Magurro. By the time they arrived, the president was in a state of shocked silence.

“I am sure there is no possible method by which we might repay your generosity, young Tom Swift.”

“If possible, and only if you wish, we may be able to trade you for your mineral dye. Even if not, we offer to assist you in the ways we have just discussed without pay.”

President Latumba suggested letting the ladies and Bud off near the city’s only shopping area. The girls readily agreed and soon dragged Bud off and into a small crowd.

On arrival at the airport, Tom and the president went immediately to the rear of the *Sky Queen*. There, Tom aimed an electronic key at a panel causing the hangar door to rise and a ramp to extend to the ground. He excused himself and hopped up onto the ramp and into the hangar. He unhooked the shipping cables from the tiny craft and used the *Queen’s* winch system to let it down the ramp and onto the tarmac.

Watching all this, and then seeing the tiny craft’s rotors start to unfold and expand to their working size, the president exclaimed, “Amazing! It actually flies, Tom?”

“Yes, sir. It flies up to two hundred and twenty knots forward speed and can climb to more than ten thousand feet. This version can lift more than two thousand pounds of payload along with two people. We plan to use it to help transport and install the ERB.”

Tom explained what the ERB was, its basic design and capabilities. Whistling in amazement, the president asked questions about it while Tom prepared the Skeeter for flight. They climbed aboard and were soon soaring about 500 feet above the small capital city.

“If you would head almost due north and about two miles from the airport I can show you the first location,” Latumba told Tom.

Although the site had possibilities it was so heavily overgrown that Tom felt it would take too long to prepare it for the quick test.

As every moment seemed to be important to the survival of these people, he asked the president about the alternate sites.

Site number two proved to be unsuitable due to the steep nature of the terrain. "I will have to account for that in the future," Tom told himself.

Site three was also deemed a no-go by Tom. "I'm sorry, President Latumba, but there is far too much wind in that location. It would evaporate the water right back off of the collection column. Is there any other place?"

"Would you consider taking it directly to our most desperate village and testing it there, Tom," he asked.

"It worked in our tests back home, so I am sure that it will work out in the jungle. May we use the rest of today to make sure that nothing was jostled during our flight, and then head out tomorrow to the village?"

The president agreed, and Tom flew them back to the airport. President Latumba promised to return at 7:00 the following morning. As he was driven off, Chow came running up to Tom.

"You ain't gonna believe this, Tom, but these folk are fixin' to build old Chow the most bee-yute of a shirt out of the dangdest green fabric I ever seen!"

Sensing the chef's excitement, but not wanting to pass on an opportunity to tease the man about his somewhat gaudy dress sense, Tom asked, "Are you going to promise to not run around blinding Bud and me with it?"

"Ah, shucks. I knows yer just teasing me, Tom. But, you cain't believe how nifty that green material is. And it smells just like a Texas thunder storm when ya get it outside," he declared.

Chow's statement almost registered with Tom, but his mind was racing ahead setting up a mental schedule for all the checks that would be necessary to prepare and transport the ERB to its test location. The cook shook his head and departed, knowing that further conversation would be useless when Tom had 'that' look in his eyes.

During the next few hours Tom supervised the unloading and setting up of the ERB. Following a quick check it was determined that the unit was almost 100% ready to go.

The only thing Tom insisted on doing was to replace one of the electronic modules responsible for maintaining the charge state of the built-in solar battery array.

The original one had either been jostled loose during the flight or had a slight flaw that had not shown up at Swift Enterprises.

Bud and the girls arrived back at the airport as Tom was nearing completion of his checks. The girls had both found head scarves made of extremely fine woven plant fibers along with an assortment of baskets and some carved items to take back to Shopton as gifts.

Tom admired their purchases but then excused himself to finish his work.

Twenty minutes later, he declared the unit ready to go. He was about to place a call to the president's office but noticed a familiar face sitting inside of the control building.

Seeing Tom looking at him, President Latumba rose and walked out of the building.

"I did not want to be a bother to you or your companions, Tom," he said.

Tom suggested that he and the president take the Skeeter on a quick flight to the village where the ERB would be installed. They flew about 30 minutes to the north east until they spotted the village, below.

President Latumba suddenly pointed and said, "Look. There. The clearing slightly to the right... that's the village of Oombatu. That is where we must land."

Tom told the man he wanted to circle the area before landing.

The president stopped him saying, "We must land now. Before the villagers have time to become frightened. *If your helicopter scares them, they might become dangerous!*"

CHAPTER 11 /

A DIFFICULT DECISION

TOM, SUDDENLY unsure of how the villagers might react to the Skeeter dropping from the sky, asked his passenger what to expect.

“Tom. I sent a messenger on motorcycle out to Oombatu yesterday. If they have already arrived and informed the villagers of our coming we have nothing to fear. But if they have not... Many of our villages contain very superstitious people. They sometimes react with violence to the unknown.”

Tom nodded in understanding “You have motorcycles?”

“Motorcycle, Tom. Just one. Just as we have only a few vehicles all of which are in terrible disrepair. The motorcycle is actually what you call an all terrain vehicle. There is a narrow pathway kept cleared between each village and the capital.” He pointed below. “Ah. All is well. See the people down there waving? We can make your additional trip around the area now.”

He went on to explain that Magurro received one tank shipment of gasoline each month from a neighboring country, part of an agreement going back more than a dozen years. “Roughly five thousand liters.”

“We must be careful in our use of the gasoline, but we only use our vehicles on special occasions. The majority of the fuel goes into our electrical generating station. At that, we only run the generator at night.”

“I can provide you with a solution to your electricity needs, sir,” Tom offered as they completed their circuit.

Tom sighted a good location for the Skeeter along with a second location just 200 feet away where the ERB might be installed. He circled one more time around the village and then set the tiny helicopter down. Within seconds more than fifty villagers came into the clearing, waiting.

Tom and the president alit from the craft. Tom noticed that the villagers all dipped their heads in respect for their national leader. After only seconds, they all raised their heads, their tired, smiling faces looking expectantly.

“This, Tom,” Latumba said pointing at one of the oldest women in the group, “is Margat. She is the village leader. She is also the mother of my late wife.”

Walking up to the woman he placed his hands on her shoulders, bowed his head forward until his forehead touched the top of her head, and spoke a few words in their native language, then said, “Margat. I come with this young man to help us all in our struggles. I hope we find you and your people well.”

Stepping back, he looked into her eyes. She tilted her head to the side and replied, “We have lost another child this past few days. I hope that you and your white friend can help. We are near our end,” she said with great sadness evident in her voice.

“Tom? May I ask you explain the function of your silver column to Margat, please?”

“Certainly! Ma’am? My company has created a machine that should be able to take small amounts of water out of the air, clean it so that it is pure and safe to drink, and then to let you take enough each day to keep your people alive and healthy.”

“Is this true?” she asked, looking not at Tom but at the president.

“I believe this is true, Margat.” He stated. “We have not been able to test it in the city, but Tom can have it here tomorrow morning and making water by...” he faltered, looking to Tom for information.

“Oh. By mid day, certainly,” Tom stated. “It will take only a short time to set it up in that clearing over there,” he said pointing toward the area he had spotted from above. “That is, if you will give us permission to use that area,” he added, seeing a look of consternation cross her face.

“That area,” she said, “is considered to be a location of thought and healing and happiness...” As if having a sudden happy thought herself, she looked up at Tom and said, “That should make it a place for your machine, a special place for a machine that will bring health and happiness to our village. You may place it there.”

Following a few more minutes of conversation where Tom described in general details how the ERB would function, he and President Latumba took off and returned to the airport.

He asked Slim to transport a 200-gallon tank of water to the village before nightfall.

The next morning the ERB was fully encased in a harness that was soon attached to the bottom of the Skeeter. It was decided that trying to use the Skeeter to both transport the ERB as well as the team necessary to install it would take too long. Therefore, the team would be transported to a location in the jungle less than a half-mile from the village and lowered using the winch system aboard the *Sky*

Queen. That would be far enough away so that the jet lifters would not damage any of the nearby jungle. They could hike to the village.

Tom lifted off moments later with the ERB dangling beneath, and headed back toward the village. The bulk and weight of the ERB strained the Skeeter's lift and speed abilities, but he was able to make it to the village in about seventy-five minutes.

On the way, he had spotted the Flying Lab going by overhead and to the west. Tom had radioed them with his estimated time of arrival.

Coming in over the village, Tom noticed that the installation team, led by Bud, had already made their way from the 'drop' site and were waiting with equipment and guy wires.

Tom hovered directly over the site and radioed Bud. "Ready down there?"

"Roger, Tom," Bud replied. "Lower away!"

It took only a few minutes to slowly lower the ERB into position. Fortunately, the villagers had long ago flattened the ground in this clearing, so there was no need to prepare the ground. It was perfectly level.

Tom kept the Skeeter hovering with the ERB attached while the team extended a lightweight ladder and attached the six guy wires that would ensure the ERB would stay upright even in a storm. These were quickly attached to a series of anchors that had been driven into the hard ground at the edge of the clearing. Each anchor was more than 10 feet long, self-seating and would take more than the power of the Skeeter to pull from the ground.

Finally, Tom flipped the switch that detached the harness and piloted the tiny copter to the main clearing where he and the president had landed earlier than day.

Margat and several older villagers approached him as he debarked from the craft.

"We bring you words of thanks, for that is all we can offer," she said. Indicating the others, she continued, "These are the elders of our village. I do not wish to sadden you, but I must have you understand that we are in great danger. If your machine can bring water to our village, we can survive. If not, then all the elders will go out into the jungle where we will be no further burden to the small amounts of water our well provides."

Tom was aghast. He knew that Margat meant that the elders would die to make the meager supplies last longer for the younger

villagers. He was now even more determined that he must succeed, that the ERB must make water enough to save all of the villagers.

“Ma’am. You have my word that I will do everything in my power to make sure that *everyone*,” he put great emphasis on that word, “everyone will live and prosper in your village.”

Margat and the others looked at each other, then she spoke a single word... “Good!”

By the time Tom arrived at the ERB site, Bud was pacing around with a worried look on his face. “Tom,” he said not looking the young inventor in the eyes. “It isn’t working like back at Enterprises.”

Tom’s heart sank, until he noticed that the entire team had their faces turned away, several barely able to keep from laughing.

“Budworth Barclay! Tell the truth before I start crying,” Tom said sternly.

“Okay, genius boy. It works even better than back home!”

The entire team cheered as Tom approached the control and status panel. Taking a look at the readouts he let out a yip of glee. “Wahoo! Seventeen percent higher yield than our tests back home. Those last minute changes really make a difference!”

He turned to Margat and the villagers. “It works, ma’am.” Pointing to the column, now wet and glistening, he continued, “that is water being removed from the air. Not enough for you to notice, but enough to slide down the column and for the purification process to begin. We should have enough water to test in about twenty minutes, and water to dispense for drinking in less than an hour.”

A tear formed in the corner of the old woman’s left eye. She bowed her head and in a low voice said, “If this is truly to be giving us water, then you must be in league with highest of beings. You give us water which is surely the same as giving us life!” With that, she turned from Tom and walked slowly out of the clearing. The others left with her, leaving Tom alone with the ERB.

Tom was struck dumb. Almost always humble, he could scarcely believe the woman’s words and her sentiments.

Ten minutes later one of the assembly crew found him still standing and looking at the place where Margat had stood.

“Umm, skipper? You okay?” he asked.

Almost as if coming out of a dream, Tom turned to look at the

man. “Huh? Oh, yeah, Dan. I was lost in thought for a minute.”

“I just wanted to take a water sample and give it a test. That all right with you?”

“Absolutely.” Tom shook off the last mental cobwebs and helped the technician draw off a liter of the newly collected and purified water. The collection tank already had several gallons of water in it with more coming through the pipe from the antibacterial chamber.

Within minutes the technician showed Tom the results. “Absolutely pure and ready to drink,” Tom stated. “Go and get Margat and the village elders for me, please. I’m going to show them that they now have a continuous supply of fresh water.”

Dave disappeared while Tom turned back to the ERB. He was just unfolding a collapsible drinking cup when the villagers began to arrive, Margat in the lead.

“Ma’am. We have water!” Tom showed her how the tap system worked and poured a full cup of water. He asked if she would like to be the first to taste it, but seeing a hint of mistrust in her eyes, he then suggested that he drink the first cup. She approved and he upended the cup drinking every drop.

Watching his face carefully, Margat suddenly smiled. “You are still alive! You must be making good water. I will now sample it, please.”

Tom took out another cup and opened it. He let the woman operate the tap making sure she understood that it must be turned off completely between each amount dispensed. She understood and put the cup to her lips.

Taking a small sip, her eyes grew large and round like saucers. She finished the cup of water, handed the empty container to Tom, and slowly collapsed to the ground at his feet.

Tom went white and speechless. The villagers looked from the prostrate form of their village leader and back to Tom. He began to feel panic rising in his throat. What had happened? Why had the woman collapsed? He knew he couldn’t run. If this was something he had caused, he would take responsibility.

With an almost girlish giggle, Margat sat up and pointed at Tom.

“Ha!” she said. “I have startled you. Yes?”

“W-w-w-well,” Tom stammered, “you sure did. You *are* all right, aren’t you?”

“Oh, yes. I am old, tired and weak, but I am better right now than

I was a minute ago. Your water device has made me so. I was simply overcome with great joy.”

An hour later they all returned to the clearing where the ERB had already produced nearly fifty gallons of water.

Tom took a box of the collapsible cups from Dave and began handing them out to the villagers. After they each received a cup, Dave and another technician showed them how to unfold and refold the cups for future use.

Proudly, Margat provided translations for the many who did not speak English. She then showed each of them how to turn on the flow of the water to fill their cups. Several times she raised her voice at someone who didn't quite understand that the tap must be manually turned off to preserve the precious resource.

Each villager took a tentative sip of the water and then practically gulped down the rest of their cups.

Tom explained to Margat that the machine needed about a full day in order to totally fill the tank and that they might run out before each villager had their first taste, but the ERB successfully stayed just ahead of the demand finally running dry just as the second to last person filled their cup. Seeing that the water had stopped flowing before he had turned the tap off, the man gladly shared his cup with the last person, a very old man who had hung back from the others until the end.

“You will all be able to start having more cups in about four hours,” Tom told the crowd of villagers

“How much this produce in water, mister Tom?” one of the village teenagers asked.

“Enough for each person to have as many as ten cups per day,” he replied showing the boy all his fingers. “Plus water to properly wash food and to use in cooking as well. Any extra can be put in containers for your goats and chickens to drink.”

Now it was Margat's turn to be speechless. She muttered her thanks to Tom almost bringing the youth to tears as her emotions poured out in the relief she felt at this wonderful news.

“With this, perhaps we will not all die. Many are already sick from lack of water. The young are given more than the old, as is proper, but even we ancient ones feel the clawing thirst every day! Your gift of life is like that *of a god!*”

CHAPTER 12 /

INVASION!

TOM WAS speechless. He had become accustomed to having praise heaped on his inventions, but he tried to disassociate himself from the success of his endeavors. He was always embarrassed in the face of personal praise, but this declaration from the village leader stunned him.

“M-m-ma-Margat,” he stammered unsure of what to say. “This is just a big piece of equipment. It isn’t anything strange or mysterious or sent from the heavens.”

Margat placed a hand on his forearm, smiling. “Young Tom, I see embarrassment in your face. I am sorry to have put it there. Perhaps I misspoke. I should have said that your gift of this machine will allow the gods to make up their own minds whether to let us live on.” She looked into his eyes and smiled. “We have you to thank for giving *them* the opportunity to allow us a longer existence.”

Tom stayed in the clearing for another half hour thinking over what Margat had said. He understood that the inventions from Swift Enterprises had been responsible for many good things around the world but he had never come face-to-face with the fact that he and the Enterprises team could be responsible for actually saving people he knew and could touch.

He roused himself and went to find the rest of the installation team. He shook hands with each and thanked them. Bud and Hank suggested that one of them remain behind for a few hours but that everyone else could head back to the city. He returned to the Skeeter and was soon flying back.

The *Sky Queen*’s crew was to spend an enjoyable evening at the home of the president. Chow had secretly arranged to provide a large supply of foodstuffs for the official cook to use in preparing their feast. He had heard that there was usually just enough food to go around for the country’s people without any extra to export.

The African chef looked closely at the boxes of steaks, potatoes, tomatoes, fresh fruits and vegetables for some time. But she was most curious about the whole pineapples that Chow had added at the last moment. Her eyes went wide at the sight of the tropical fruit. Chow asked to use one of her knives and showed her how to peel away the outer rind exposing the tart and sweet inner flesh.

He could tell that she was unsure of the flavor having never had

anything like it, but that she was pondering the possibilities. Like any good cook, she would figure out how to use this new fruit.

Chow left her alone and headed back to the airport arriving just as the crew had been getting ready to go to the president's home. He quickly changed into one of his more subdued western shirts—primarily gold and brown with a coyote and cacti motif.

The evening proved to be both relaxing and educational as the president and Felix regaled the Americans with humorous and historical stories and anecdotes of their nation. Chow, a veteran story teller, amazed the Africans with stories of the Texas plains and his life on the range before hooking up with Tom and his father.

Even though they had heard many of his stories, the girls giggled along with his vivid descriptions and tall tales.

Later, as they sat eating, Tom remarked, “Threw in a few tall ones, didn't you, old timer?”

“Wahl, shucks, Tom. Cain't tell a story and stick to *all* the facts!”

President Latumba turned to Tom saying, “This is indeed a time to celebrate. With your wonderful water devices my people can be free to return to their lives without fear that they will die during the next wave of heat. To you,” he said raising a glass filled with a local beverage made from a guava-like fruit and the sap of a plant that grew wild around the capital city, “I say thank you! Thank you a thousand times.”

The Enterprises crew all cheered the president's toast and sampled their drinks. They were universally deemed to be delicious.

The food was brought to the table by several young girls under the watchful eye of the chef. She inspected each plate as it was brought by her, frequently arranging a piece of meat or a piece of vegetable with a pair of sticks she used like chopsticks.

Everyone ate heartily. President Latumba declared that the meat—prime rib provided by Chow—that had been seared and then stewed in flavorful broth was among the best he had tasted in several years.

When Chow asked if he had tasted much beef the president laughed. “Yes, Chow. I have spent many years in European nations and once in the United States. But in those days I was a poor student so my experience was mainly with beef burgers. Once, with cheese. Marvelous!”

The group laughed at this declaration.

“So, Tom, what are your plans? Can you remain here for more

days?”

“President Latumba... I would be happy to do so, but I have so many things I must accomplish back home including building and delivering the rest of the ERBs to your villages.”

The remainder of the evening was spent in pleasant discussions punctuated by a savory dessert that was topped with tiny roasted bits of pineapple. The chef hovered in the background trying to determine if she had succeeded in using the unfamiliar fruit properly.

Chow got up and approached the woman. Smiling at her he wrapped his big arms around her and gave her a gentle squeeze. “Ma’am? You can join up with my ole chuck wagon any day you care to. Best use of an old piney-apple I ever did taste!”

Near midnight Tom graciously thanked the president for his hospitality and excused himself and the crew saying that they needed to get an early start the following morning.

After a good night’s sleep the crew had a sausage and baked eggs breakfast and then prepared for departure. All of the equipment that had been moved out of the *Sky Queen* during their stay was restowed. The Kangaroo Kub and Skeeter were moved back in and lashed down. Finally, the hangar doors were closed and sealed.

Tom walked up to Felix who had been sitting on a chair just outside of his combination airport terminal and house.

Tom shook the man’s hand and thanked him for his assistance during their stay. He could see that the man wished to ask or say something, so he prompted him. “Is there anything you need from us before we go?”

Shyly looking toward his feet, Felix muttered, “I would like to fly, please.”

Slightly shocked, Tom asked the man if he had ever been up in an airplane.

Felix shook his head. “I have worked here at the airport and have seen a few different planes, but I have never been up in the air.”

“Would the president mind if you took a short flight with us? I would be happy to go see him and ask for permission.”

Tom sensed that Felix was struggling under the weight of whether asking the president for permission to leave his beloved airport for personal reasons was more important than his burning desire to soar up among the sky he had been looking at and dreaming about his entire life.

Tom put a hand on Felix's shoulder and said, "I believe that you cannot truly appreciate the job you do down here unless you experience flying up there." He pointed skyward and Felix's eyes followed Tom's finger.

Tom hiked the several blocks to the president's residence hoping that he would not be waking the president. He knocked on the door. President Latumba answered the door himself. He smiled at Tom. "Good morning, Tom. Are you prepared to depart now?"

Tom said that they were ready, but added that he wanted to take Felix up for a short flight before they all flew back to the U.S. Laughing, the president agreed.

"It is about time that Felix was able to realize his life-long dream. For giving him that pleasure I personally thank you."

Tom warmly shook the older man's hand and walked back to the airport

Felix was pacing back and forth biting his fingernails. He looked up with both expectation and a little fear as Tom approached.

"It's all set, Felix. Up we go!"

Clapping his hands like a small child, Felix practically ran to the hatch on the side of the Flying Lab. Once inside he allowed Tom to lead the way to the cockpit. Tom let him sit in the co-pilot's seat but warned him not to touch any of the controls until Tom said it was okay.

The *Queen* soared skyward moments later. At an altitude of 15,000 feet Tom suggested that Felix take a look out the window. The man looked out and then down. He quickly turned to Tom saying, "It is so big down there. Does it get bigger as we go higher?"

Tom chuckled. "Well, Felix, it seems bigger because you can see farther the higher we go."

Felix seemed to understand the concept. "I wish to go higher to see bigger, please."

"Next stop, sporting goods and small appliances!" Bud said from his position standing behind them. With that, the *Sky Queen* resumed its upward journey with Felix looking out the window in absolute awe.

As they rose to an altitude of 50,000 feet Tom explained the basic function of the control yoke and the foot pedals. He asked if Felix would like to try a brief stint as the pilot, and the happy African man readily agreed.

Within a few moments he seemed comfortable enough for Tom to suggest a slow turn. Tom told him the proper steps then Felix repeated the steps involved and Tom agreed that he was correct. He maneuvered the giant jet easily through a 180-degree turn. Steadying the aircraft on its new course he asked if they could travel faster.

Tom said, “Just hold onto the yoke. I’ll give her more throttle.” With that the plane shot forward and they were soon traveling at near the speed of sound. Felix was enthralled by the quickly shifting scenery below. Twenty minutes later he returned control to Tom and thanks him again and again.

Tom slowed the jet and turned back toward the capital city.

“Skipper,” came a call from Zimby Cox, currently manning the radar and communications board. “I’m seeing a group of fast-moving aircraft heading into the airport. Must be military. Are they expecting someone?”

Felix denied any knowledge of an impending military visit.

Tom was suddenly worried. He took the great ship up to an altitude of 70,00 feet and then turned the controls over to Bud. Felix gave up his cherished seat to Arv.

Finally reaching the airspace above the small city Tom manned the SuperSight scope. This was a combination optical and computer-enhanced telescope system. At 70,000 feet it could bring into sharp focus an area as wide as six city blocks as if seen from 800 feet, or narrow down to an area the size of a typical living room as if seen from a height of less than 40 feet.

The picture was displayed on a 40-inch high definition monitor above the control board.

A movement at the front of the airport building caught everyone’s attention first as Tom aimed the scope at the terminal building. The presidential vehicle that Tom and his team had been carried in on their previous visit pulled up and a single individual in a flight suit climbed out. Tom zoomed in on the man in time to watch him look all around and then into the sky. He had no military insignia on his flight suit, but Tom could see a holster attached to the right side of the suit.

Everyone around the display flinched back as the man seemed to be looking directly up into their eyes. Tom quickly realized that this was just due to the extreme magnification provided by the scope. The man soon looked away and at other areas of the sky. It appeared that he had totally missed seeing the *Sky Queen* after all.

Tom pulled back the view as the man walked through the airport building and out onto the airfield. As Tom repositioned he scope all aboard the *Sky Queen* could see the six older French Mirage III aircraft sitting right where the *Sky Queen* had been an hour earlier. Bearing no markings, they were painted in dark camouflage colors.

The man motioned to the five other pilots standing in a group near the fighter jets, and they all gathered together in front of one of the Mirages. As he spoke he motioned up pointing directly up and toward the hovering *Sky Queen*.

A cold shiver ran down Tom's spine as he saw one of the pilots pull a pair of compact binoculars out of a pocket in his suit and use them to look up.

"Looks like we've been spotted, gang. Time to put a bit of airspace between us and them. Hank? Radio back home and see if they can report this to the State Department."

Tom returned to the cockpit and piloted the *Sky Queen* back along their original track at top speed. Ten minutes later, Hank related his conversation with the U.S. authorities. "Since we don't have official status here, we are supposed to stay clear of any trouble and come home."

Tom groaned.

"Unless," Hank continued, "we believe that the situation changes and it becomes safe for us to approach Magurro."

Everyone let out a little cheer. Tom again reversed their course and headed back toward the capital. In moments a radar report showed that the six unknown aircraft had taken off and had headed at a fairly low altitude almost directly to the south. They were soon passing out of Magurro airspace. An hour later Tom was assured that they were not anywhere to be seen and would probably not return to Magurro suddenly, so he took the *Sky Queen* back to the capital city and soon landed on the beaten-up tarmac.

As Tom and Hank lowered themselves to the ground through the belly hatch a man, bloodied and staggering came out of the building. It was a man they knew to be the president's personal driver.

"Bud!" Tom yelled. Turning to the hatch he called up, "Get Doc Simpson down here, pronto! We have injured!"

He and Hank ran to the injured man and supported him between them, walking him over to the shade of the *Sky Queen* and propping him up against one of her wheels. Within seconds the young medico dropped down from the hatch then reached back up and grabbed

his medical bag. He knelt down and began attending to the man's wounds.

"Looks like he took a beating from those thugs. Here is an obvious gun butt strike," he said indicating a gash on the man's forehead. He broke open a self-freezing pack and applied it to the man's head wound causing him to flinch with pain.

"Just relax," Tom said as the man tried to get up. "Let Doc fix you up and then you can tell us what happened."

Sandy poked her head out of the hatch. "Can we do anything, Tom?"

"No. You and Bash just stay put. We don't know what's going on here!"

Felix came tumbling out of the *Sky Queen*. "My god! Raffie! What did they do to you? Is President Latumba injured?"

A look of mixed fear and anger flashed over the wounded African's face. "No," he croaked. "I must tell our Tom Swift that these are very bad men who came. The president asked me to listen to the radio while you were gone. They called on the radio to tell me they were having problems..." he coughed several times, then continued, "...said they had a fire on a jet. Wanted an emergency landing. I didn't know. Oh..." he moaned, "I just didn't know that they were General Abu Ramsay's men."

"Abu Ramsay?" Tom asked.

Felix stated, "A very bad man who took over Wahlotia, the part of our former nation to the East. Spends all his money on military equipment. He has left us alone until now because we have nothing he could want!" Felix winced in sympathy as Doc Simpson applied an anesthetic ointment to the wound on his friend's forehead. In seconds, the pain had obviously disappeared as Raffie first looked confused and then pleased. He continued his story.

He told Tom that the jets had landed and that uniformed men got out, most of them running into the little airport building. One had hit him in the head without any warning when he had demanded to know what they wanted. He said that the men then split up, most heading back out to their planes but that two had left through the front door and had stolen the airport motorcycle.

Only the leader had returned and then all of the aircraft had taken off.

Felix said he feared for the safety of their president and begged Tom to go see if he was okay. Tom agreed immediately.

“Hank, you come with me but first will you ask Bud and Art to join us. Issue e-guns for everyone, too.”

The group left the airport several minutes later. Although the invaders had obviously tried to immobilize the president’s vehicle by smashing the ignition, Art put a skill he had gained as a teenager to use and soon had ‘hot-wired’ the ignition. The trip to the president’s residence took only a few minutes.

As Tom jumped out and approached the front door it opened to reveal President Latumba. He had a strained smile on his face and began shifting his eyes over his shoulder. He mouthed the word ‘help’ and Tom immediately knew that the president was in danger.

Tom motioned behind his back to his companions that they should move away from the door. Glancing slightly to each side to ensure their positions, Tom said, “President Latumba. I have come to see if you are all right. May I come in, please?”

A gun suddenly appeared around the president’s right side, and the man holding it came out from behind his hostage. “Oh, yes. Please do come in and join us,” he sneered in a heavy African accent.

“Who are you?” Tom demanded standing his ground. “Why are you here?”

“Our glorious ruler has declared that this territory should be taken back until such time as we can verify that it has nothing of further value to us. This, I personally think, is a waste of time. This so-called little nation of Magurro has never had anything and never will!” He laughed viscusly. “Perhaps it would be best if we simply burned it to the ground!”

“And you expect to hold the entire country hostage with your one little gun?” Tom asked.

The man looked puzzled for a moment. Then he replied, “Of course not, you young fool. We have taken over the pitiful airport and even now my fellow freedom fighters are taking over the city,” he boasted.

“Umm... would that be the other men who flew out of here an hour or so ago?”

“What do you mean?” the man demanded. Stopping to think a moment he added, “and where did you come from? We have the airport secured. The only road has been blockaded and we surround this residence!” His voice became shrill and his eyes began darting back and forth.

Tom knew that the man was unbalanced but could not determine how far to push him lest he injure his hostage.

“Your comrades took off in your jets more than an hour ago. They left nobody behind except you. You are all alone now. Give up. Give me the gun and we will see that you get help.”

The man suddenly raised the gun that had begun sagging and pointed to at Tom. In an instant, President Latumba brought his right elbow down onto the man’s wrist, then jabbed it violently into the man’s ribs. Stepping aside he allowed Tom to rush past and administer a solid uppercut to the man’s jaw knocking their would-be attacker unconscious.

Tom’s team rushed in and tied the man up while Tom and the president sat down in an adjoining room to talk. “Mr. President. We saw that your driver had been attacked. And you were a hostage. What happened here?”

The president told Tom of the occurrences of the past several hours, beginning with the recent airport invasion and providing Tom with more information about General Abu Ramsay. He concluded with, “I believe that I must ask for military assistance from the United Nations now. We have no ability to ward off even the slightest of attacks as you have seen.”

“I agree. Since we don’t carry any weapons to help you fight off an invasion from outsiders such as this General Ramsay it would be best if a security force could be stationed here for the time being. I’ll go back to the *Sky Queen* and radio your desires back to the United States. I would like to have you accompany us both for your safety as well as to have our doctor check you over.”

President Latumba was more concerned once he saw his wounded driver that he was in his own health. “I am unharmed, only inconvenienced,” he declared.

While the others attended to the injured man, Tom had a thought and returned to the control deck of the Flying Lab. He knew that they had seen six aircraft on the ground and six pilots, but that meant that the man they had in custody had to come from somewhere. But where, Tom mused.

He sat down at the SuperScope and opened the saved video file. By carefully maneuvering the picture around and enhancing various areas he suddenly saw what it was they had all previously missed.

One of the Mirages, presumably the leader’s, was a one-seat model and the others were all two-seat models. That meant five extra men. He went back to the cockpit and looked out at the

airfield. Something caught his eye.

He picked up a pair of binoculars and trained them on the object. He felt the blood rush out of his face. Five flight helmets sitting in a small pile!

That meant that five people hadn't departed with the jets. Take away their prisoner and that left...

CHAPTER 13 /

SURPRISE ALLY—SURPRISE ENEMY

A MOVEMENT below the *Sky Queen's* starboard side got Tom's attention. Hank Sterling was slowly backing up, hands raised.

Tom raced to the other side of the cockpit and peered at the ground below. To his horror he saw four new uniformed men plus their erstwhile prisoner each with a vicious-looking machine pistol pointed at his crew. A light lit up on the control dash indicating that a small emergency hatch had just opened below.

Tom quickly moved to the locker where an e-gun was kept. Grabbing it and checking the power charge, he headed quietly down the passageway and to a ladder going to the two lower decks. He had barely reached the middle deck when Hank came rushing up the ladder.

"Tom!" he panted. "Guns. Prisoners!"

"I saw, Hank. We have to do something to save them," Tom said, suddenly calm and determined.

The two men looked out a small porthole on the port side and saw that their entire crew was being covered by the gunmen. President Latumba was sitting in between them with Felix, and his wounded driver was laying on the ground beside him.

"Hank," he said remembering something. "There is a small window at the back of the cockpit that can be opened. It's about six inches square. I think I can get it opened silently and get my e-gun pointed at the invaders. How far do you think they are?" he asked knowing that there was a definite limit to the effectiveness of the electronic weapons.

"I'd guess about seventeen or eighteen feet out and the thirty-five or so feet down."

Tom put his trigonometry skills to use and computed a real distance of between forty-two and forty-three feet. He groaned knowing that the range of the weapon was only forty feet, even at its highest setting. At best he could hope to give the enemy a shock but that would only let them know of his presence.

"Let me have the gun, Tom. I'll drop back down through the access hatch and get the drop on them."

Tom said he feared that Hank could only incapacitate two or three of the enemy before they could get off a shot at him. "They've got

real guns. I can't chance that, Hank. There has to be another way. He peered back out the cockpit window. "We're in luck, Hank. Look!"

Hank peeked out the window and saw that the enemy gunmen were herding their prisoners over toward the terminal. Art Wiltessa looked up and saw Hank in the window. He smiled and used one hand to spell out a message in ASL, the finger-spelling language. "h-a-v-e---e-g-u-n---c-n---g-t---t-w-o"

Hank gave him a thumbs-up and related the message to Tom. "Can you see the gunmen down there now?" Tom asked.

"No. They must be right under the fuselage.

"Perfect. Go down to the port side hatch and wait for the signal."

"Signal?" Hank asked.

"Yeah. You'll know when it happens. After that pop out of the hatch and get a shot in on as many as you can." Hank left at a run and was soon in position. Tom looked out. Art spotted him, so Tom began giving him a finger countdown. Five... Four... Three... Two...

Tom reached over the pilot's seat and flipped a couple switches. Hitting the START button he sent searing hot flames out of the jet lifters for a count of two.

It was over in seconds. Hank exited the craft and soon, the scorched and shocked gunmen were disarmed and tied up. Tom's crew had been spared all but a brief blast of hot air. Tom ordered the prisoners to be locked in a disused storage cabin aboard the *Sky Queen*.

With quick good-byes and the presentation to Felix of a complete first aid kit from Doc, they were soon jetting homeward. En route Doc Simpson attended to the worst of the burns but secretly took pleasure in not providing any pain relief to the prisoners.

"Tom," Damon Swift said as he entered Tom's private lab in the underground hangar two days later. "I have a bit of news. Rather amazing as it turns out."

"What, Dad?"

"Well, you will remember the man who ran the elevator at the G-20 building in Germany?" Tom nodded not remembering the face, just that there was someone operating the elevator. "It seems that he is actually an agent from our friends at British Intelligence. They've never really gotten over the distrust from two world wars

and appear to dislike the fact that so many European and international organizations have set up in Germany. So, they have had this man stationed there for years.”

“What happens if he is found out?” Tom asked.

“His is a very tightly kept secret. Even we are now sworn to complete secrecy about him. But, here is the actual news.”

“Okay.”

“Our little meeting there, and the meetings of more than a dozen other international corporations, were a clever ruse to get both Swift Enterprises on the job as well as forcing the U.S. to pay their fair share of the costs. The committee had already determined that we were the only company capable of pulling something off but they knew they needed to make it look like we were called on the carpet along with the rest of them. We already knew that.”

“I believe they are right about our being the ones who can do this.”

“So do I. It turns out that the meetings of every other company went on for hours and hours. We were in and out in less than fifteen minutes.”

“So, they had this planned in advance?” Tom asked.

“Looks that way. Anyway, the G-20 group is said to be very happy. Ms. Clothiet-Warner was even overheard to say that she was very pleased with what has occurred so far. She has requested that funding necessary to keep your proposed fleet of Revivicators be made available to us immediately. Plus, she is suggesting that the G-20 nations share the costs of protecting the fleet once they are in the air.”

They spoke a few minutes longer about the situation with both agreeing that they could hold no ill feelings about the tactics used to get their participation. Both scientists felt that it was incumbent upon scientist the world around to do whatever they could to protect the Earth. As they parted, Damon Swift remarked, “It was science that developed the things that pollute our world; it must be science that digs us out of this mess!”

“I haven’t heard anything about those five unknown African fliers we turned over to the FBI. Have you?” Tom inquired.

“Only that they haven’t said a single word and that General Abu Ramsay’s country has not yet come forward to claim them or complain about their incarceration.”

Tom left the office and hopped onto one of the little electric

scooters that Enterprise employees had access to so they could quickly get around the four mile square experimental complex. He headed for his lab and office in the underground hangar where the *Sky Queen* was kept berthed.

As he past beneath the nose of the giant Flying Lab he reached out and patted her fuselage. He was quite proud of the *Queen*, one of his first inventions upon completion of high school. He had flown in her practically around the world. She was a marvel of both workmanship and size. "Pretty soon, my girl," Tom said softly to the aircraft, "you are going to have a big sister. Hope you don't think we'll forget you."

He walked into the office and sat down at his terminal. Within minutes his mind was completely engaged in thoughts of his two environmental projects.

Chow brought in a quick lunch of a freshly-carved roast turkey sandwich with a slice of cherry pie. Tom ate it absently, but soon finished everything the chef had brought for him. When Chow returned an hour later to remove the dishes he was happy to see that the food had been consumed. Chow worried like a mother hen when Tom got so involved in a project that he forgot to eat.

A few minutes after Chow departed the Enterprises switchboard put though a phone call.

"Hello, Tom. This is Sheriff Blane from Tolland County down here in Connecticut," the deep voice said.

"Oh. Hello, Sheriff Blane. What can I do for you?" Tom asked.

"Well. I understand that you helped an outfit called Pederson Photovoltaics get set up in the old tractor factory. It looks like there may be a problem that I thought you should be made aware of."

Curious as well as bothered, Tom asked, "What could be wrong, sir? I was on the phone with Mr. Pederson just yesterday afternoon. He didn't mention anything."

"It isn't anything that he would know about right off what with being new to the area. One of my deputies was driving past the factory this morning when he spotted somebody we have on our 'keep tabs on' list. A real bad egg once thought to be part of a domestic terrorist organization. Environmental terrorism like spiking trees before loggers go in. Burning their trucks. That sort of thing."

Tom expressed his concerns.

"We lost track of him a year or so ago, Tom. This sighting raises

questions since it looks like he is working at your friend's factory. We understood that they were just there making solar panels."

"That's correct, Sheriff. They are doing an exclusive job for us over the next month or more. We were led to believe they were only going to use their original employees. I'll need to check into this right away."

The sheriff agreed and told Tom that he was going to double check to see if there were any outstanding warrants or requests for notification from any state or federal agencies. They agreed to touch base by the end of the workday.

Tom's phone call to the factory was unproductive. He found out that the man in question was doing day labor cleaning up the grounds around the factory and performing a few building repairs. Tom didn't want to alarm Mr. Pederson so he fended off any questions by simply saying that the local law enforcement had seen an unknown man wandering around the grounds when they believed that nobody should be working outside.

He plunged back into working on the automatic control program for the Revivicators. The onboard systems would need to be sophisticated enough to perform their own checks and to determine what might be fixed or adjusted in order to keep itself flying, or whether to call in a special visit from one of the proposed tender aircraft.

Lots of quasi-intelligence I'll need to create, he thought.

A visit from Bud proved to be a slight diversion from his work but as Bud had admitted, "I'm not the genius boy here, Tom. That's your department. I just provide interruptions and infrequent reminders about dates we have with the girls."

After Bud had departed, Tom sat back to think about how to simplify the process. He pondered the daily processes of flight maneuvers over the assigned area, assuring that the GPS positioning was correct and functioning, the operation of the cleaning and ozone-producing mechanism and the need to frequently clean the systems.

Just before his phone rang, he had decided that a single computer system would not be sufficient; he would need to create three separate computer packages and programs to do everything necessary. They would 'talk' to each other and the primary computer would be running a subroutine program to coordinate the other two.

The call was from Sheriff Blane. "Tom. Got some strange news.

That fellow, did I tell you that his name is Artie MacGregor? Anyway, I took a drive out to the factory and he hightailed it behind one of the building when he saw my patrol car.”

“What do you make of that, sir?” Tom inquired

“Probably either he’s up to no good, or he has a very guilty conscience!”

Tom told the lawman about his call to the company owner and how this MacGregor evidently was just doing some day laboring around the facility.

The sheriff promised to keep a close watch on the factory over the next weeks and to let Tom know if anything occurred. Tom thanked the man and they hung up.

Several days later Tom received a call from Hank Sterling. “Tom. We’ve got problems!”

“What’s going on, Hank?”

“We just received the first batch of photovoltaic panels from Pederson’s and every one of them has damage! Most don’t put out any measurable voltage, and all of them have some sort of chemical etching on the backs where all of the wiring sits.”

Tom quickly left his office and went to the receiving building, where he met up with Hank. With great dismay Tom immediately saw the problems. Many of the micro-traces had been cut through with a very thin knife or blade and some sort of fluid—probably an acid, Tom decided—had been splashed on all of them. What the knife had only started was completed by the etching liquid getting inside of the sealed plastic casing

“How could this happen, Harlan?”

“You know Pederson’s. They have done some pretty good work for us, but they are a little lax when it comes to protecting their panels once they get them made. We’ve put up with some poor packaging issues for months.”

Tom shook his head. “This looks like deliberate damage. Pederson’s has a saboteur and I may know who it is!” Tom hurried back to his office and called the Tolland County Sheriff’s Office.

He was told that the sheriff had left for the day but was on a brief patrol run before he would head home. Tom informed the operator of his previous conversations with the man. “I’ll put this call right through, Mr. Swift. I believe the sheriff will want to speak with you directly.”

A few seconds later the connection was made. "Hello, Tom. I didn't expect to hear from you so soon."

Tom told the sheriff of the sabotaged panels. "These were shipped out just this morning and were trucked directly to our facility. The driver knows to make no stops without radioing in. He didn't, so we have to assume that this damage happened before the panels were put on the truck."

"I'm going to haul in our Mr. MacGregor for questioning. I'll head over there right away and put on frequent patrols all night and all day until we nab him!"

Tom, again, thanked the officer.

He called Harlan Ames to tell him of the sabotaged panels and his conversations with the sheriff. Harlan was shocked and angry, and he promised to get the reports off to the FBI. If MacGregor was known to them they would want to learn of his recent activities.

Tom only picked at his dinner than evening. His mother knew that cajoling him wouldn't result in more than a wan smile and more picking, so she silently picked up his plate and left the dining room. Later she placed a tray on Tom's bedside table with a couple chocolate chip cookies and a glass of milk.

Tom had a fitful night of sleep and rose early. He was disappointed in the schedule hit his new super aircraft would suffer due to the lack of a working set of solar panels. He called the foreman's desk and left the man a message informing him of the delay, then took his car to Swift Enterprises.

He was deep into the computer controller design when his phone rang. It was Sheriff Blane.

"Great news! We got MacGregor. He was in some dive bar just a few blocks from the factory last night. He had started to brag about getting a job at the new factory. The bartender says that he overheard MacGregor claiming more and more things the more beers he consumed. By about the eighth beer MacGregor was hinting that he was in a position to destroy the factory."

"Oh, dear!" Tom said.

"The bartender had heard enough and called our office. We had a car in the area and the two deputies walked into the bar and marched MacGregor out less than a minute later. He's sleeping it off in one of our not-too-comfortable cells."

"Could I come up and be there for the questioning, sir? I'd like to bring our head of Security as well."

The sheriff agreed and said he would hold off any questioning until Tom could arrive a few hours later.

Tom and Harlan took a Swift helicopter up and were given permission to land at the sheriff's office helo pad only an hour later.

When they were shown into the observation room off of the interrogation room, Tom asked whether they might be able to speak to MacGregor directly.

"I'm afraid not, Tom," the sheriff remarked. "Since speaking to you I received a call from the FBI. We can do the preliminary interrogation, but it needs to be just one sheriff in the room and everything is to be videoed.

Harlan laid a hand on Tom's shoulder. "It's okay, Tom. Perhaps the sheriff would consider taking in a list of our questions?" He looked at the county lawman who smiled back, nodding his head slightly.

Tom and Harlan spent a few minutes writing up a list of seven questions that the sheriff put into his notebook before heading into the room with the prisoner.

MacGregor started out blustering about his rights and his innocence. It became clear that many of the questions hit close to some sore spots in his mind. Within minutes he was sweating profusely and insisting on a lawyer. The sheriff left the room having asked only the first four of the Swift questions.

Harlan and Tom waited with the sheriff until a public defender arrived an hour later. The questioning resumed but the lawyer instructed MacGregor to make no comments. This continued until the sheriff threw in a final comment. "With your terrorist ties, MacGregor, the Department of Homeland Security is going to love taking you off my hands. Good luck in federal lockup!"

As the sheriff stood up to leave MacGregor broke down and begged to be allowed to tell his story. His defender tried to get him to stop but the words just flowed out.

"I ain't done nothin' illegal. Not for two years. I got this friend who told me about the job at the plant and I went there the other day. They gave me the job of cleaning up around the buildings. My friend, Louie, took me out and we got really plastered the first night. When I woke up, my keys were missing. I ran into him and he handed them back telling me he just wanted to keep me from getting into an accident.

"So?"

“Thing is, I don’t got no car! Ask me anything else. I’ll tell ya, I swear!”

By the time Tom and Harlan departed, MacGregor had confessed to nothing other than some recent shoplifting. When asked about the panel shipment he claimed to not have any access to the inside of the building other than during business hours.

They left the sheriff’s office convinced that MacGregor was probably not the saboteur. Harlan suggested a visit to the Pederson factory and this “Louie” person. They had already been informed of the damaged shipment, and Mr. Pederson had been absolutely sickened by the news.

“Tom! Oh my dear Tom. How can you ever forgive us for failing you like this?” he wailed upon their arrival.

Tom introduced Harlan who asked, “Could you show us the facility and describe everything you and your people did to prepare and ship the panels?”

They received a complete tour of the facility and Mr. Pederson described in detail the product completing and packaging steps. “We packed everything up the evening before we put it on the truck. The crates remained locked up in this room overnight. When we got back in I double-checked the shipping seals. They were all intact, so I had the crates loaded into the truck, sealed it myself and the driver took off at exactly 10:40. It’s a three hour and fifteen minute drive. When did it arrive?”

Tom replied that the truck had entered Enterprises at 2:01 that afternoon. “That’s just a difference of six minutes, Not enough to give anyone the time to do this amount of damage. Plus, the acid had been sitting on the backs of the panels for at least eight or nine hours to do that much damage.”

“Who has keys to the facility other than yourself?” Harlan asked.

“Well, it’s me, my vice president, Harry Morton, the line foreman, Allan Post, and our shipping/receiving manager, Bob Burns. Just the four keys.”

“You only have a total of four keys to the entire facility?” Tom asked.

“Oh,” replied Mr. Pederson. “We have a master spare that is kept in the company safe in my office.”

They went to his office where he opened the safe. They key wasn’t there!

“Oh, my!” Mr. Pederson exclaimed. He paled and needed to sit

down. His secretary brought him a cup of water with trembling hands. A few minutes later Tom and Harlan felt he had recovered enough to ask a few more questions.

Harlan began, "The logical question is 'who has the safe combination other than you,' Mr. Pederson?"

He paused to think. "Just me and Miss Davis out there. The old safe back at our other location had to be left behind because it is just too heavy to move. We probably have a half dozen people who know that one. But we haven't been here long enough for me to need to give it out to anybody."

A sudden noise in the other room got their attention. A second later Miss Davis rushed into the office. "Mr. Pederson," she sobbed taking out a handkerchief from her sleeve and blowing her nose. "I didn't know. I didn't know he'd do anything like this!"

"Didn't know what, Miss Davis?" demanded Harlan.

"It's my boyfriend, Louis. He was terribly angry when I told him I was moving out here, even if it was temporary. He told me that he could get the company to move back there if I could get him into the factory. I took the spare key the other day and gave it to him. What have I done?"

"Where is he now?" Mr. Pederson demanded. "I'll wring his miserable neck!"

Miss Davis slowly collapsed onto a chair crying harder than ever. She named a rather seedy motel only minutes from the factory along with his room number. Harlan made a quick call to the sheriff giving him the motel name and number. The sheriff promised to have cars surround the area within minutes.

Tom asked the woman, "Do you know what he was doing the other night? Where he was?"

She replied that her boyfriend had made an excuse and left the motel room for more than three hours only returning around midnight. When she had asked where he had been, she said he slapped her and told her to mind her own business. "I haven't been back there since."

"If you are really not involved in the nasty business, then you will want him put away. Along with any charges from here I would insist that you file domestic battery charges against him!" her boss insisted.

They continued to ask the woman questions. A half hour later the office phone rang. It was Sheriff Blane. "We have him!" he joyfully

exclaimed. "The miserable so-and-so was just leaving the motel room when we got there. Tried to barricade himself in and slip out the bathroom window. Got stuck! Ha!"

Tom agreed that this was good news. "Has he admitted anything, yet?"

"He started singing even before we asked him his name. He says that a man phoned him a week ago and offered him a thousand dollars to break into the factory and ruin the shipment to Swift Enterprises. A foreign accent. He thought it sounded like an Arab. Does that mean anything to you?"

Tom lied and said that it didn't. After he handed Harlan the phone so that the Swift security man could get all the details, Tom turned to Mr. Pederson and his secretary.

"I suggest that you go directly to the sheriff's office and admit to everything. I don't know whether Mr. Pederson wants to press charges against you, but you need to come as clean as you can. I think that Swift Enterprises will only press charges against you if you don't tell all."

As they flew back to Shopton, he told Harlan of his discussion. Harlan agreed. "It might prove pretty difficult to prove our case, skipper. Hopefully your little speech will get her to do the right thing. One thing's for sure, her boyfriend is going to do some serious time for this unless he makes a deal and can point the authorities to the mysterious Arab man on the phone."

Tom spent the rest of the day perfecting his design for the Revivicator auto-control units. By closing time he had a complete set of preliminary circuit designs to turn over to the engineering department. He added some weight and dimension suggestions to the diagrams and then locked them away in his office safe.

The next morning he called in Arv Hanson and gave him the designs. "These look like real little gems, Tom," he stated. "And we just received a shipment of new programmable chips that should make these a breeze to build. I think we can beat your weight limits by a good pound or two. I'll work with Electronics to get the modules prototyped."

As he was leaving the phone rang.

"Hello?"

"Tom Swift?" asked the voice

"Yes. To whom and I speaking, please?"

"This is Quimby Narz, Tom. CIA. I have some terrible news for

you. We just received word from the United Nations that your water-making contraption in that little African nation has *been stolen!*

CHAPTER 14 /

JUNGLE DEATH

TOM'S HEART SANK. Stolen!

Too many questions came tumbling out of his mouth that the CIA agent finally had to raise his voice, "Enough, Tom! Hold on a sec! A telegram was delivered to the British Consulate in an adjoining country less than five hours ago. I'll read it to you."

Narz cleared his throat then began, "President Latumba, Nation of Magurro to The United States of America, Tom Swift. Two days ago a helicopter flew over the village of Oombatu. People thought it to be TS and all went to village center. Helicopter released some sort of gas knocking everyone unconscious. When they awoke that night, the water device had been taken. Help please."

The agent paused, so Tom asked, "Is there any mention of injuries, Quimby?"

"No, Tom. Sorry that it took a couple days to get this to you, but I've only had it in my hands for about ten minutes as it is."

"Can we get State Department and Magurro clearance to head back first thing tomorrow?" he asked the agent.

"I'm sure that Mr. Latumba will give his immediate blessings..." the CIA man hesitated. "...Uh... Tom? You seem to have gotten yourself on the wrong side of one of the senior senators. Anthony Arbuthnot Grimsby?"

Tom explained in brief detail of the senator's long-running hatred of Swift Enterprises and of their more recent run-ins.

"Well, that explains a lot! I'll run this one upstairs and see if the Director wants to put his weight behind going over the head of our little joy-killer. I'll give you a call back in an hour or so to give you an update. Oh, Tom. One last thing. That man you tangled with... the one who tried to kill you in your office? We just received the word that he was taken out of the hyperbaric chamber this morning. He evidently had recovered from his injuries enough to be transferred to a private room."

"That's a load off my mind," Tom replied.

"Well, here's the bad news. An hour later he managed to get a supply of pills. He left a ranting note. Full of phrases like 'Swift defies the face of the Originator,' that's one of the other names of Allah by the way. They weren't able to save him. Definitely a suicide!"

Tom said goodbye and hung up.

He sat, stunned, for more than five minutes. The news really rattled him.

It was less than twenty minutes later that he got a return call from agent Narz. “Okay, Tom. You’re on for tomorrow. Of course we are still working the slow communications in and out of Magurro, but you have State’s blessing to depart any time after 5:00 a.m. tomorrow. Just keep us advised about how long you are going to need to be there and what might be happening.”

Tom promised daily reports back. Within minutes he was making a series of calls, first to his father to verify that he had done the right thing, and then to several department heads to get the same team assembled that had been to the African nation previously. He also spoke with Hank Sterling to see if there was going to be any way to have a replacement ready in time.

Disappointed that the answer was negative, Tom arranged for a 1,000 gallon water tank to be loaded aboard the *Queen* and filled with sterilized water along with several 200 gallon empties. He hoped that it would handle the villager’s needs for long enough to either retrieve the stolen ERB or to get a new one finished and delivered—estimated to be about four days after their arrival.

He directed that the ultrasonic cycloplane, the SwiftStorm be placed in the hangar alongside the water tank and the Skeeter helicopter.

Lifting off from the Enterprises airfield at exactly 5:00 a.m., Tom and his crew headed for Africa transiting the Atlantic at the Flying Lab’s fastest speed—greater than Mach 2. Half way across the water Tom asked Art Wiltessa, who was manning the communications station, to try contacting Magurro. He wanted to make sure that President Latumba not only knew that they had received his message but that he approved of their arriving in just a few hours.

Within five minutes Art indicated that he had raised someone at the Magurro airport. “He won’t give me his name, skipper, but he doesn’t sound at all like our friend, Felix. Sounds rather surely, in fact,” he added.

Given the experience of a few weeks previous with the mysterious Mirage III aircraft, Tom was incredibly concerned. He asked to be connected. “Tom Swift to Magurro airport. Come in, please.”

After a minute, the radio crackled to life, “This is Magurro. Swift airplane? You will not approach Magurro territory. President Latumba says to go away. We are not needing your here now. Again I say that you are to not come to Magurro!” With that the

connection cut off.

Tom sat quietly for a moment before Bud asked, "Tom? Didn't he mispronounced the president's name?"

Tom sat up and turned to face his friend. "My god, Bud! You're right! He pronounced it 'laa tum baa' and not 'la toom buh' like the president does. Something bad must have happened there. We have to see what we can do!"

Hank Sterling, a number of years older and often wiser than the impetuous youth placed a hand on Tom's shoulder. "Tom, I think it might be wiser to contact the State Department and ask for their guidance. We can set down in the Canary Islands to wait for their response. We will still be within a couple hours of Magurro, and we will conserve fuel."

"You're right, Hank," Tom conceded, "but I just can't stand by if something horrible is happening there. I think that we contact back home but head directly to Magurro, only at about seventy thousand feet. They don't have any way of spotting us that high up, but we can use our SuperSight scope to see what is going on down there."

While Tom and Art Wiltessa contacted first Enterprises and then the U.S. State Department, Hank took over with Bud continuing as copilot. The *Queen* kept up its breakneck pace and was within sight of continental Africa about fifty minutes later. During that time, Tom had radioed his report and suggestion for high-altitude recon and had received permission to proceed.

"First sign of anything bad," the State Department official said, "and you bug out of there, pronto! We need you to report what you see, not get shot down!"

Tom returned to his place at the controls and soon had the giant aircraft zooming up in altitude. Tom had the *Queen* back on level flight and top speed at the new altitude as soon as he could. An hour later he began to reduce airspeed so that they could approach Magurro slowly enough to go into a hover directly over the capital city.

Art had been doing overtime at the radio contacting each governmental agency in every African nation they were to overfly. He had been given an emergency code to relay that would identify them as an authorized flight in the name of the United Nations Mercy Overflight group.

Once they arrived over the city Tom set the controls to hold their current position.

As with the previous appearance of unexpected aircraft in

Magurro, Tom moved to the SuperSight scope. A group of lofty clouds made it practically impossible to get a good look at the ground. He believed he caught a glimpse of one or more large aircraft on the tarmac at the airport but couldn't be sure. After more than twenty minutes he gave up asking Hank to come back and take over for him.

"Give a yell if you get any clear look," Tom requested as they passed each other.

He had barely settled into the seat when Hank sang out, "Getting something, skipper. The clouds are scattering."

Tom rushed back to the SuperSight room and took the seat vacated by Hank. Everyone let out a moan of dismay as Tom zeroed in on a large camouflage-painted military aircraft at the airport. It appeared to be some sort of supply plane with four jet engines attached near the tail.

"UN, maybe?" Bud asked.

Tom shook his head.

"Really bad guys, Tom?" he then asked.

"I'm very much afraid so. It looks like our unknown enemy may have taken over the airport again and maybe even the city," Tom said sadly.

Art offered to radio the info to the State Department and to wait for their instructions. Tom agreed hoping that he might locate each of the persons from the aircraft but knew from its size that it might carry more than fifty armed soldiers... or friendly passengers. In less than three minutes he spotted nine people in various positions around the airport or near their parked aircraft each holding what looked like a semi-automatic weapon.

A flurry of activity began occurring around the mystery aircraft. Within minutes all visible uniformed men had entered the aircraft and it had begun to taxi to the runway. It accelerated down the airport's only runway and lumbered into the sky heading almost due east. As Tom watched, it disappeared into a haze several miles outside of the city proper.

He decided to risk landing. Ten minutes later the huge Flying Lab had reached the ground and the crew were hastily climbing out. Tom left Slim Davis at the controls with orders to take the aircraft up and depart the area at the first sign of the return of the mystery jet.

With great dismay Tom turned in time to see their friend Felix come stumbling out of the airport's only building. His arms were

oozing blood and his eyes wide. Recognizing Tom, he broke into a lopsided grin and crumpled to the ground.

Doc Simpson leapt forward and began working on the injured man. After a cursory exam he informed Tom that Felix had obviously fended off an attack, then had been beaten, but was only superficially wounded. Doc, Bud and Hank carefully lifted the man from the ground and carried him to the *Sky Queen*. Activating a set of stairs they carried Felix into the giant plane and up to the small infirmary.

Once he had made a check of the surrounding area, Tom asked for a team of three of the crew to run to the presidential residence to check on President Latumba's condition. Even before they had the opportunity to depart, the president drove himself onto the airfield and up to beside the Flying Lab.

After reassuring Tom that he was in fine shape he asked about the condition of Felix. "He did not answer my ringing at the front door a few moments ago. I assumed that he might have been attacked. Is he..." the powerful African man faltered, his voice catching on his obvious emotions, "...is he all right?"

Tom reassured the man, "Our doctor says he was only beaten but not badly injured. Let's go up and see him."

Felix, his head and both arms bandaged but a smile on his face, rose from his cot to greet his national leader. "Oh, my dear Mister President Latumba. Can you forgive me for allowing those men to land? And, after what happened before? It is all my fault. Oh, dear..." he trailed off.

Laughing gently, the president reached out and touched the other man's face. "Felix, you could have done nothing else. We are not barbarians. We would never be capable of offering resistance. I bear you no ill will. In fact, I commend you."

After ensuring that his countryman would be released in the morning, the president invited Tom to join him at his residence.

There, they discussed the second invasion. "They landed and within minutes a man of General Abu Ramsay's nationalist army came to my door to tell me that we are in violation of something the general has obviously made up. He received a brief radio message and departed immediately. I heard their aircraft depart within a few minutes and you know the rest."

They discussed the need for the country to receive some sort of armed guard, probably a UN detachment of aircraft to repel any future incursions and landings by the general's men.

President Latumba said, “We have made the petition for a protection force but have received nothing more than, ‘it is under consideration.’ What more can we do?”

The *Sky Queen* stayed at the airport that evening as Tom made radio call after call to various Enterprises departments and governmental agencies. By the time midnight local time rolled around he had arranged for a UN air group from Gibraltar to immediately fly down a half dozen Harrier-type vertical take-off jets, fully armed and ready to protect the little nation in the short term.

He also arranged for an emergency airlift of food and medical supplies to be delivered to the airport in Cairo, Egypt that the Flying Lab would pick up and deliver to Magurro over a period of several days. It would then return to Enterprises briefly to pick up three new ERBs. Tom learned that Arv Hanson and his team could begin building them at the rate of two a day starting in about five days. The Flying Lab could carry three of them at a time and would begin ferrying them over in groups as soon as possible.

Tom realized how much easier it would be once his new *Sky Queen* Mark II was completed. Just one of her new cargo pods would accommodate at least eight of the ERBs.

The next morning Tom, Bud, Hank, and Art Wiltessa climbed aboard the SwiftStorm and flew to the remote village of Oombatu. On arrival the other three unloaded a pair of 200-gallon water containers and proceeded to ration out water to the villagers while Tom sought Margat to discuss what had happened.

“A loud airship flew over our heads three days ago. In a very little time we all fell asleep. That was in the early morning. When I woke up it was night. Everyone wandered around for many minutes, our heads spinning and feeling very... strange.” She continued to describe how one villager suddenly yelled out that the water-making machine was missing. Tom asked her to accompany him to the clearing so that he could check for any clues.

Tom immediately could see the remains of the cut guy wires and signs of tire tracks of a heavy truck, plus evidence that the ERB had been dragged more than twenty feet. His spirits were somewhat lifted when he discovered no evidence of destruction or broken pieces from the device. With hope, he thought, we can follow these tracks and find it!

To Margat he said, “Margat. We will either get your water machine back or bring another one. We will make sure that nobody can steal it again!”

She smiled at him, tilted her head to one side and softly said, “Dear young white man. The jungle is not a safe place. The people around us are not nice people. I hope that what you say is true, but I fear that we will have other problems.” With that, she turned and slowly walked from the clearing.

Tom followed her back to the central village area.

All heads turned quickly to face the South where a loud roaring whine was coming. Within seconds a pair of black fighter jets passed overhead, clearing the jungle canopy by no more than a few dozen feet.

Tom turned to Bud, exclaiming, “Those are just like the jets that attacked us at the South Pole! Only, these are painted in camouflage, not all black. Like the first ones at the airport.”

“MIGs? Where are they going, Tom?” asked Art.

“I have no idea, but one thing’s for sure, they don’t seem to have any friendly intentions!” Secretly, Tom began to worry thinking that the jets could be looking for them not someone else. Deciding to not raise anyone’s level of anxiety, he suggested, “Maybe we need to get back to the capital city for the evening. No use staying around here.”

Everyone agreed that it would be best to depart. Tom promised to have several more containers of water delivered before sundown.

The following morning, Tom rose early, grabbed a left-over sandwich from the night before for breakfast, and slipped out of the shared hut heading for the SwiftStorm. He decided to not wake anyone at the early hour. Besides, he thought, he would just be making a short recon trip up north and would be back in less than an hour, plenty of time before the others would be getting out of their beds.

Using minimum throttle he taxied the craft several hundred yards from the *Sky Queen* and then rose straight into the air reaching 1,000 feet in under a minute. Applying forward throttle, the cycloplane soon was heading away from the airport.

He checked his GPS system and punched in coordinates for the Oombatu village intending to pass far overhead. He hoped to pick up the trail left by the truck responsible for the theft of the ER

He knew he could guess the approximate heading from that point of the mystery jets—about the same as the direction as the tire tracks—and he wanted to see if he could find evidence of whether they simply passed out of the country or if they had had other plans.

Crossing above Oombatu at 5,000 feet he turned to a new heading of 035. He checked the nav system’s long-range map and

discovered that this heading would take him out of Magurro's airspace and on a direct course for the capital of Wahlotu, home of General Abu Ramsay and his para-military thugs.

"Oh, oh," he muttered to himself. "That can't bode well."

He flew on for more than twenty minutes until he began to see wisps of smoke coming from the jungle about ten miles ahead. Pulling back on the controls and turning to the left, he eased the cycloplane away from the area and began climbing higher, heading slightly away from the smoke. "Don't want to give my position away in case of trouble," he thought.

Arriving at 25,000 feet, he turned the sleek craft back onto a course that would bring him over a position less than a mile from the smoke. Using binoculars, he looked down at the area trying to see what might be causing the smoke. Tom let out a groan once he determined the source. He set the cycloplane into a shallow spiral dive around the area, losing about 2,000 feet per minute. The closer he got to the ground, the more certain he was of what he was seeing.

There, in the middle of a rough airfield, was the stolen ERB lying on its side and ripped apart evidently by an explosion of some sort. But, what had him almost sick was the sight of more than a dozen twisted bodies near the ERB. A little further to the west he could see the specific source of the smoke; a crude building made from rough-hewn tree logs was still partly on fire at the edge of the cleared area.

As he passed overhead at less than 500 feet, Tom could see eight or nine more bodies in or near the burnt-out building. Fifty feet away he saw the truck that must have carried the raiding team into Oombatu and had been used to steal the ERB. The cab had been ripped apart by a hail of bullets.

Gaining altitude, Tom radioed the *Sky Queen* hoping that someone would be up and in the cockpit.

"Tom to *Queen*... Tom to *Queen*... come in, please."

"Hey, Tom. Where the heck are you?" came Slim Davis' voice. "People were beginning to worry down here when they saw that the Storm was gone.

"Sorry, Slim. I had a thought and wanted to check things out before anybody got up." He went on to describe the grisly findings at the raider's camp.

"You think that those MIGs had any thing to do with it, skipper?"

"Slim, I don't know what to think," Tom replied the sadness evident in his voice.

CHAPTER 15 /

MISSING: T. SWIFT

“GET THE *Queen* warmed up and bring her up here,” Tom requested. He gave Slim his GPS position and the other man said that they would be on their way within ten minutes.

Hank came on the line telling Tom, “Skipper. You need to stay aloft. I wouldn’t land; you can’t be sure you won’t get ambushed!”

Tom agreed and raised the SwiftStorm back up to 10,000 feet. He really didn’t want to see the carnage at close range.

When the Flying Lab arrived he flew the cycloplane aboard and headed up to the cockpit while a flight tech lashed her down.

Tom used the jet’s camera system to take a detailed survey of the area and its surroundings. Thinking it better to return to Magurro rather than risk his crew, Tom turned the great craft around. En route he radioed back to Shopton apprising his father of what had occurred and stressing the need for the UN security force to get there as soon as possible.

“Good news on that front,” Damon Swift responded. “They have left their base within the past hour. I didn’t radio you because I thought you all might still be in bed. Isn’t it about 6:00 a.m. there?”

“Yeah. But I was anxious to find what happened to the ERB. Now I know and it looks like a total loss!”

The elder Swift promised that a pair of ERB would be completed that day and would be loaded onto a Swift transport jet. Tom could expect them in Magurro within 24 hours.

Having a sudden thought, Tom asked his father to have several thousand pounds of dry concrete loaded onto the jet as well as another thousand gallons of water. He also asked that the two ERBs be outfitted with self-anchoring bolts to attach them to the planned concrete pads. Tom believed that a large pad would prevent anyone from being able to tip over the ERBs and to transport them

Several hours later Felix came running out to the *Queen* to tell Tom of the imminent arrival of the UN aircraft. Tom went back to the terminal building to help Felix describe that they would find upon arrival. The commander gave his thanks and said that they would make a pass overhead in about twenty-five minutes.

A group of four fighter aircraft and their combination refueling/supply C130 aircraft landed with military precision and all taxied

into positions at different points of the airfield. Tom surmised, correctly, that this was to keep any attacker from being able to harm more than a single craft at a time. The larger C-130 taxied up to a position near the *Sky Queen*.

Tom met the commander with a handshake and a smile. "I sure am glad you are here, sir. The folks of this small country are all but helpless." The two men went into the *Sky Queen* where Tom provided a brief tour while he continued to describe the issues they all faced.

With an amazed shake of his head, the commander remarked, "I would give my retirement fund to have one of these," while he patted the wall next to him. "Beautiful ship. Just beautiful."

Turning sober, he stared Tom directly in the eyes and said, "We are here on UN charter to repel any attackers within the limits of the national boundaries, but we may not initiate any attack... even if it would be to secure the borders."

Tom suggested that they go see the president, but before they could depart he arrived. Tom and the UN commander discussed what they would be doing while there, and the commander asked that the president review and sign a declaration of request for the UN forces to stay.

Latumba gladly signed the document after asking, "What occurs if we decide that your generous assistance is no longer required?"

"In that case, sir, we fold up our proverbial tents and disappear into the night!"

The Swift transport jet arrived the next day. After watching the unloading of the two ERBs, the concrete and the water, Tom's jaw dropped when he saw a special gift his father had included. It was a non-flying 1/4 scale working model of his Repelatron skyway paving machine hand-built by Arv Hanson!

The Swift pilot, Gary Anders, handed Tom a note from his father.

Dear Tom,

I know this wasn't on your Christmas wish list, but I figured that you might be able to use it to connect the various villages to the capital. It holds enough Durafoam to pave an eight-foot wide road of about a mile long per fill-up. And, I had a set of jungle clearing blades added to the front.

My calculations show that you should be able to pave about twelve miles a day. A cargo jet will bring more supplies in a couple days. That should give you enough for your first fifty miles or so. Good luck, son.

Love, Dad.

Tom was flabbergasted. Had the older inventor read his mind? He decided to load the SwiftStorm with the maximum cargo of the concrete mix and to fly to Oombatu. It would take three trips to take the concrete there and another four trips to ferry the water, but with the villagers assisting he believed he could have the entire set of materials at the village within seven hours. That would leave three hours of daylight to set up forms from some thin yet sturdy strips of Durastress—Tom's light and incredibly strong polymer—and to mix and pour the two pads.

Things proceeded even faster than Tom had anticipated, so he asked that the Skeeter be rolled out of the *Sky Queen* and that Bud bring one of the ERBs to the village. It was transported and set down right next to the site of the pads before 6:00 p.m. After a quick check, Tom activated the device and could soon see the first drops of condensation sliding down the central column.

Everything went so well that both pads were poured and curing before sundown. The fast cure nature of the concrete would mean that they would be ready for their ERBs by mid-morning. Tom decided to remain at the village that evening while Bud and the team returned to the capital. They would return the following morning with the other ERB and at least two of the UN military men.

When they arrived, Tom took the UN people for a recon flight to the site of the destroyed ERB. The commander and his lead pilot were both saddened and angered by the sights they viewed. Since both men carried side arms it was decided to land and take a detailed look around.

The UN men looked at each body determining that there were no survivors while Tom looked at the ERB. As he surmised, it was a total loss. Even the hard-cased solar batteries had been ripped apart by whatever explosion had occurred. Turning away from the crumpled ERB, Tom saw that his two companions were returning from their reconnoiter.

“Nobody left alive, I’m afraid,” the commander stated. “Got a full set of photos to send in with the exception of your machine there. Mind if I take a few for the official report?”

Tom had no objections. Within minutes, photos taken, the three climbed back into their aircraft and returned to the capital city.

On landing he was informed that both of the ERBs were now mounted, fully functional and that test had shown that even a determined team of men could not bring them down.

Elated, Tom decided to return to Shopton that afternoon, promising to return in a few days with another three ERBs to be installed in the capital city.

“Tom,” his father had said the following morning, “would you mind handling something for me out in Washington State before you go back to Africa? I received a request from one of our suppliers to attend their annual shareholders’ meeting tomorrow, but I have to be at the Citadel to finish one of our projects for the military.”

Tom agreed thinking that a long, solo flight out and back would give him lots of time to think about several things he wanted to improve on the Revivicators.

He arrived in the northwest state the following mid-day. The meeting turned out to be little more than a meet and greet since there were only about fifty shareholders in the entire company, mostly employees and owners, and only thirty-eight of them had attended the meeting. He gave what Damon Swift termed, “The twenty minute speech,” before the meeting ended.

After a company car dropped him back off at the local airfield he performed his preflight checks and was soon jetting upwards. Switching to national control from the local area controllers he was advised of an oncoming storm that would require he fly north of the border and about 100 miles into Canadian airspace. He was granted permission and turned his little jet north even before reaching his flight altitude of 28,000 feet.

About fifty minutes later a worried look crossed his face as his weather radar showed that the storm extended even farther north, was also too far south to skirt without doubling back, and seemed to range from about 12,000 feet up to over 51,000 feet. *Just have to try to find the quiet pockets*, he thought.

Tom looked out of the cockpit window at the billowing storm clouds directly in his path. With no time to steer clear, he gripped the controls tighter and headed into them. He immediately realized that he had made an error in doing so. The little craft shook

violently almost wrenching the controls from his hands several times.

“Got to get to cleaner air,” he thought, fighting to keep the craft steady and right side up. A quick glance at the gauges did nothing to help his situation. They went haywire for a few seconds before the dual CRTs went blank. Tom could smell the burnt fuses and some charred wiring.

“There goes the radio, too,” he said out loud. Not one to give into swearing, at least not lightly, Tom uncharacteristically exclaimed, “Damn! What is this?”

As suddenly as he had entered the clouds the jet broke through into a clear area. He was able to orient himself, grateful because his little jet had almost flipped on its side once his instruments had stopped providing him with an artificial horizon. Righting the craft he decided to circle within the clear air for a few moments. But as soon as he pressed the left foot pedal to initiate his turn the plane juddered and then bucked under him. He let up off the rudder and the plane seemed to steady itself. Looking around and outside the canopy, Tom’s heart sank.

He could now see why the little jet was shaking about; the vertical stabilizer was bent at a sickening angle and appeared to be about ready to tear from the little craft.

Trying to lessen the strain he cut the throttle bringing the jet down to near stall speed. He began to slow and to lose altitude. “I’m too high up to parachute,” he thought. “Got to get to under fifteen hundred feet if I can. Even then I’ll probably pass out from the cold and end up frost bitten... or worse!”

Hoping that the little jet would hold together long enough to get down from its original altitude, Tom gently applied the craft’s flaps, just a little at a time. As he hoped, the extra drag dropped his airspeed further and caused the jet to begin a quick descent. But now he saw that he was about to re-enter the mysterious clouds surrounding him. He knew that he might not survive going back into them, so he gently eased his feet back onto the rudder pedals.

“I gave it left pedal last time, maybe right this time,” he muttered.

He pressed the pedal hoping for a few degrees of turn angle. Instead, he heard a wrenching sound and the jet began spinning out of control. Tom didn’t need to look around to know that the stabilizer had torn away and he was totally out of control.

As the jet spun and bucked he tried to tighten his parachute harness. He was beginning to feel sick from the violent motion. He

gave up deciding that he needed to save all his strength and concentration for getting the canopy away and getting out of the jet without it banging into him.

He managed to get the canopy release handle between his fingers. He pulled with all his might. At first he thought it must be jammed, but the seals gave way and the canopy disappeared from around him. Tom's ears popped from the sudden decompression, all noise suddenly stopping. Tom didn't even have time to contemplate his deafness; he had to get out of the jet.

Wishing that this model were large enough to accommodate an ejector seat, Tom knew he had to do things the old fashioned way. Climb out and jump! But the wind, the cold and the thrashing of the craft were all working against him. He finally got his feet up from around the control column and leaned far out over the right side of the cockpit as he could.

A sudden gust of wind timed perfectly with a wild jump of the jet threw Tom from the craft. He cleared the spinning jet's right wingtip by inches and hurtled downward.

Tom tried to reach for the ripcord but his tortured arm and almost frozen hand wouldn't move. He finally gripped the ripcord handle as consciousness slipped away from him.

* * * * *

"Missing?" gasped Anne Swift when Tom's father phoned her with the news. "What do you mean, Damon? Where's Tom?" she said, desperation coming into her voice.

"We don't know. He was coming back from Washington State when his jet's transponder just disappeared. Somewhere east of the Rockies and just over the Canadian border."

"You've got to go there and find him," she pleaded. "Please?"

"Anne. I'm getting ready to go out there, but the FAA and Canadian Aviation have been notified and given all of his information. They reported a severe storm in the area, but nothing Tom shouldn't have been able to fly up and over. This could just be an equipment malfunction. We don't know right now," he said, trying to soothe her.

After promising to keep in touch as often as possible, he hung up and leaned back, rubbing his eyes and sighing. "Tom," he said looking at the ceiling, "this is one rabbit you and I had better pull out of the hat!"

Mr. Swift arranged for six aircraft from Swift Enterprises to be

dispatched to assist in the search. All were Swift cargo jets featuring jet lifters so they could hover and slowly comb almost any terrain. Three of them contained Skeeter-type helicopters and two held cycloplanes. The final one contained a command and control center and would act as the central command point for the others.

En route, he received messages from both the FAA and the Canadian authorities welcoming Swift participation, but stressing that since the last known position of Tom's jet was over Canadian soil that the Transport Canada Civil Aviation Directorate (TCCA) would have final say on when and where they could go.

Even as the Swift contingent were jetting across the continent, Tom's plight was not as bad as anyone could have imagined.

He awoke, dangling from his parachute harness in a tall, leafless tree. It was too dark to tell what kind of tree, but Tom was thankful just to be alive and could have cared less. He could remember exiting the plane but not pulling the ripcord of his parachute. This harness did not feature an emergency activation system to open the chute in the event the wearer was unable to pull the ripcord, so Tom had to believe that he had managed to do so just before slipping into unconsciousness.

Using the emergency knife in his harness, he carefully cut away the chute's lines one-by-one trying to release himself enough to be able to swing over to the main trunk. It took many minutes and careful adjustments—a line here, another line five or six over—before he got close. He was too tired from his ordeal to swing all the way over, so allowed himself to dangle there for a few minutes trying to catch his breath.

Finally, Tom began swinging again. Within just a few seconds he realized that he would never reach his goal while still attached to the chute. He would have to time his swing just right and release himself from the harness in time to bridge the final gap of about 4 feet, and then manage to grab the trunk tightly enough to keep from falling to the unseen ground below, possibly to injure or even kill himself in the process.

In his tired state he misjudged and released the harness half a second too early. He knew he wasn't going to get more than a couple of fingers onto the trunk, so he braced himself for the fall.

Which lasted for exactly two feet.

Standing there, eyes shut and teeth clenched, Tom started to giggle. He had been so close to the ground that he could have simply released the harness at any time and dropped to the leaf-covered

ground below.

Patting his jacket pockets, he located the emergency beacon transmitter and took it out. A press of the self-test button showed that the battery was a little weak, but that it should last for at least 10 hours, more than enough he told himself for someone to hear it. He was glad that he had included one of the GPS-based beacons that broadcast both the emergency code signal as well as his latitude and longitude position, accurate to within about 120 feet.

In another pocket he found an emergency Mylar blanket, silver on one side and International orange on the other. Unpacking and unfolding it, he located a dry spot against a large rock in a clearing less than fifty feet away. He wrapped the blanket around him and sat down to wait.

* * * * *

“Mr. Swift!” the radioman yelled toward the rear of the jet that had just touched down in the city of Red Deer, Alberta.

The elder Swift hurried up to the cockpit where the radio panel was located. “What? News?”

“Yes, sir! The TCCA just radioed to say that they have Tom’s radio beacon coming through, a little weak, but they believe they can make out the coordinates.”

“Thank goodness,” Damon Swift said, sitting down. “Do they know when we can have the information? We could be anywhere in a 400 mile radius within an hour.”

The radioman held up a finger indicating that something else was coming over the radio. He listened carefully, wrote a few brief notes on his ever-present pad and then pressed his ‘send’ button, saying, “Thank you, TCCA. We copy... please stand by while I relay this info to Mr. Swift.”

He listened for a moment then replied, “Yes... THAT Mr. Swift!” Turning to face the senior Swift he told him, “They have a signal beacon, with GPS and it is squawking a Swift Enterprises code... the only problem is that it is providing three different GPS points, each one more than a hundred miles from the others.”

“How is that possible?”

“Evidently, Tom was carrying one of the newest GPS beacons, one of the ones that plot three points where the person has been in the previous hour... so that trackers can follow a survivor in case they are moving; trying to walk out, so to speak.”

“Of course. I should have realized. But what the dickens is causing

the hundred mile differences? Are they along one tangent? Could Tom still be flying with the beacon transmitting?"

"Uh, not likely Mr. Swift," came the reply. "If you'll hand me that map on the other console I can show you about where the GPS points are located."

After showing how diverse the points were, and noting that one of them was actually back in the U.S. near the Montana-Idaho border, another in downtown Calgary and the third near a town called Swift Current, Saskatchewan they agreed that there was no way to tell if any of the points were legitimate.

Bud, having set his jet down and crossed the tarmac to the lead jet, poked his head into the cockpit.

Turning back to his equipment, the radioman said, "TCCA? Swift One here. We have plotted the points and see that there is no rhyme or reason to them. Mr. Swift would like me to repeat that we stand ready to assist. In fact, we have enough aircraft capable of slow flight and hovering to go to each of these points to check them. Do we have your permission?"

He listened, his shoulders slumping and his face telling the tale. "Roger... we'll stand by. Out!" He looked up at Mr. Swift. "Sorry, sir. They insist that we remain here while they do whatever it is they plan to do. They suggest that we might be brought into the search in the morning."

Bud slammed his fist into the doorjamb exclaiming, "What the heck is wrong with those dumb Canadians? We can cover more ground than they can and they just sit there refusing to let us look for Tom?"

Mr. Swift sadly shook his head telling Bud, "Bud. The Canadians are very proud of their nation and want to do whatever they can to prove it at every turn. Call it stupid, pig-headed or even insane, but the fact is that two of those GPS points are in their territorial area. If they say we sit... we sit whether we agree with it or not."

The three talked the matter over for a few minutes until Hank Sterling and Slim Davis joined them. After hearing an abbreviated version of the story, Slim suggested, "I think I may just find that my jet is having an issue with the back-up avionics package. Perhaps I should take off and head back to Shopton... maybe just drop down over the border and fly slowly? I might even need to go back and forth for awhile to, um... test things?"

Smiling, Damon Swift told the radioman to contact the TCCA to tell them of the need to return one of their aircraft to their home

base. The operator at the TCCA relayed back to them that the jet would be cleared for departure within the next half hour.

Armed with the beacon's frequency, Slim headed due south. He was only slightly startled when his equipment picked up the beacon as soon as he reached an altitude of about 5,000 feet, but surprised that he was receiving three totally different location points from those provided by the Canadian authorities.

He headed back toward Seattle, Tom's point of departure and then turned around heading east approximately 50 miles south of the U.S. Canadian border. Passing north of Spokane, Washington, he again picked up Tom's beacon.

He immediately noticed that it seemed to be broadcasting one of the TCCA-provided GPS points along with one of those he had already received. The third was new. Although it appeared to be fairly close to the Swift Current, Saskatchewan point previously given. A thought took him and he pushed the throttle to full thrust wanting to get to a point near the eastern border of Montana as soon as possible.

Once there he was elated to see that the first point still showed a location near Swift Current. The other two points were as far off as they had ever been, but held a relative direction and distance from each other almost identical to previous reading.

He radioed Damon Swift with his news and a theory.

"Slim! That's wonderful. If your idea pans out, then the one position of Swift Current remains our constant with the others seeming to be the phonies. I'll get right to the TCCA to tell them what we have discovered. You may have just saved Tom from any further suffering!"

Early the following morning, the Canadians had made a formal request for the Swift jets to take part in the search. It turned out that a maritime accident had diverted all but one helicopter from all over Alberta and British Columbia.

Taking off immediately, the jets positioned themselves twenty miles apart oriented north and south and all headed east at about 100 knots. As Slim has surmised, the position near Swift Current remained almost stationary while the other two changed in relation to the position of each of the jets often jumping by hundreds of miles.

Only two hours later the jets all reported that the GPS point where they believed Tom to be situated was a definite point of interest. Mr. Swift ordered that they converge around that point in a

rough circle about 1 mile apart.

As they all neared their stations Bud cried out over the radio, “Flare! I see a flare down there. Just a thousand yards north east of my position. I’m dropping down and going closer to investigate.”

Within minutes he reported that he spotted Tom sitting in a clearing. “He looks cold, wet and dirty, but he’s alive!” he reported with glee.

Five minutes later, Tom had been hoisted aboard Bud’s jet and all Swift aircraft headed for Regina, the closest large city and medical facility.

En route, Mr. Swift radioed the Shopton asking to be put through to Tom’s mother at their home. “Anne,” he said as soon as she answered. “Tom’s safe and we have him. We’re heading to Regina, Saskatchewan and to the medical center there. I’ll let you know as soon as we have word, but he looks to be okay.”

Anne Swift wept out loud at the other end of the line. Her husband could hear Sandy asking her what was going on, and receiving only sobs, she took the handset gently from her mother’s shaking hand. “Daddy?”

“Sandy. Tom’s safe and looks to be okay. We’re going to a hospital in Regina, Saskatchewan but will probably only be there for one night. We’ll see you in Shopton tomorrow.” He was about to sign off when a thought struck him.

“Sandy? I think that Tom may need some medicine. Some very *special* medicine. Some special, *dark haired, dark eyed* medicine. Do you understand me?”

“Daddy! You’re about as subtle as a one of Chow’s shirts. Tom’s medicine will be there in a few hours. I’ll deliver it personally!”

They agreed that Tom’s ‘medicine’ could not be discussed with him until it was delivered into his hands. With that, Mr. Swift signed off and broke the connection.

Upon arrival in Regina 35 minutes later, they were met by an ambulance and a minibus. Tom was loaded into the back on a stretcher in spite of his arguing that he felt fine. He allowed himself to be overruled by his father who rode in the back of the ambulance with him.

Bud, Hank, Chow and Slim Davis all piled into the minibus along with one other crewman who had family in the area who would meet him at the hospital.

Tom was checked into the new state-of-the-art medical center,

given a thorough check over and finally declared to be in mostly good shape. He had sustained a slight bit of frostbite to the little finger on his left hand, evidently while parachuting from his stricken jet. His glove had torn and the sub-zero cold had blistered the skin.

The doctor in charge wanted to have Tom given a couple of liters of saline solution intravenously to rehydrate him, but agreed that the youth could travel home to Shopton by late that evening.

A few hours later once the nurse had come in and removed the saline drip needles from his arms, Tom asked if he could shower and get dressed. She answered, "Not right now. You need to go down the hall to room W3. After that I think the doctor will discharge you." She left with a little smile playing around her mouth.

Puzzled, he got out of bed and headed down the hall.

"What do they want to do to me now?" he muttered as he neared the doorway. Taking a deep breath, Tom walked around the corner and into the room.

Aloud, he exclaimed, "*Oh, my!*"

CHAPTER 16 /

GOVERNMENT INTERFERENCE

“OH, TOM!” Bashalli, turning and breaking into tears, ran to the gowned teen and threw her arms around him. Pressing her face into his chest, she sobbed, “I thought that I had lost you forever!”

Tom looked down at her and gently wrapped his arms around the sobbing girl’s body. Holding her closer than the two had ever been, he whispered, “No worries, Bash. It takes a lot more to get rid of a Swift.” *And, I’ll always come home to you*, he thought.

The girl raised her gaze to meet his. Tom Swift was almost frozen with the sudden realization that he was about to kiss the girl nestled in his arms. And, the girl was about to kiss him back. Not a chaste, “welcome home” kiss on the cheek or even a quick peck on the lips.

It shouldn’t be this difficult, Tom thought as he stared into the beautiful, dark-featured face. We’ve kissed before. But, he added to himself, those have always been casual, more good friends-type or end of first date kisses.

He closed his eyes and began to move his face closer to hers. Bash opened her eyes slightly and seeing that Tom’s face was nearing hers, she closed them again, letting out small sigh. Just as their lips touched, a loud clomping noise came around the corner.

“Brand my skillet...” Chow began but faltered, quickly sizing up the situation. The two teens, realizing the scene they presented, hastily separated, both looking in slightly opposite directions. Both turning red with Tom’s color even darker than Bash’s.

In a lower, sheepish tone of voice, Chow said, “Gosh, Tom... Miss Bashalli. I’m real sorry. I go a’clattering in where I ought to tip-ee-toe. I didn’t mean to barge in on anything private like.” He turned to leave the room.

“Dear mister Charles,” Bash said. “Although what we were starting to do, I did willingly, you have probably kept me from breaking a promise made many years ago to my grandmother and to my mother.” Turning to the embarrassed youth she continued, “And dear Tom. I have so wanted to kiss you like that for many months. But, my culture in Pakistan—and my promises to my family—mean that I should only do so if we are promised in marriage.” She looked downward, sadly, then brightened up looking back into Tom’s confused eyes. “But, that doesn’t mean that you should not attempt that again in the future. Perhaps, even in the very near future?”

She and Tom laughed. Chow, sensing that the time to depart was near, cleared his throat and left the room.

“And now, my dearest Tom, you need to leave me and go get thoroughly washed and clothed. Then we will all fly back to Shopton.”

Bash went up on tip-toe and brushed her lips against Tom’s cheek and again to the corner of his mouth. He reddened, mumbled something about her being right, leaned in and kissed her more directly on the lips and wandered down the corridor, his mind spinning and his feet just possibly not quite touching the ground.

The next morning and back in Shopton, he entered the office he shared with his father. The older Swift turned away from his computer screen upon hearing Tom enter. “Oh, Son,” he said getting up to embrace the young inventor. “I am so glad to see that you are okay. Has Doc Simpson checked you out yet?”

“I was just heading over there, Dad, but thought that I had better stop off here first. I have a question.”

Damon Swift looked his son in the eyes, tilted his head slightly and smiled. “In my day, they called that look on your face ‘smitten’ son,” he said.

Tom looked past his father toward the wall that featured many of the patents both he and his father had received. Looking back at his father, Tom asked, “Is it wrong to feel so strongly about Bash? I mean, I’m hardly out of high school and she has some very strong family and cultural beliefs, and—” he ran out of words.

“My boy? If you really like the girl, then you will find ways around any obstacle. Just take things very slow.” Holding his hand up to stop Tom’s oncoming protestation he continued, “I know that you have known her for a number of months and it is clear that she feels strongly about you—Sandy has even said as much to your mother *and you didn’t hear that from me*—and everybody likes her. Just don’t overwhelm her. She has much to surmount on her journey to you. You may have already won her heart, now you have to deal with her entire culture.”

“It just all seems so complicated,” Tom bemoaned.

“When I first fell in love with your mother I would have moved a mountain, single-handed, if it meant I could be with her,” Damon told his son.

Tom embraced his father and thanked him. He left the office and headed for the dispensary where, following a brief check-up, Doc

Simpson declared him to be in fine shape, but told Tom to head home early for a good meal and an even better night's sleep. "That's an official doctor-type order, Tom," he called out as the youth departed.

Upon reaching his underground lab, he placed a call to Security to brief them on what had happened in the moments before his bail-out from his jet. Phil Radnor, the assistant chief of security then told him, "Tom. The Canadians found your jet this morning. It crashed into a hill about five miles from where you were found. It is so totally destroyed we'll probably never know just what happened. I've seen the pictures they took from about 300 feet away and absolutely nothing is recognizable except one small panel cover with one of our serial numbers engraved on it. Do you want them to scrape it up and send it here or should we try to offer to do it?"

"Send me the pictures. It may be worthless to try if it is as bad as you say. Maybe just my report will have to suffice."

Once he had seen the photographs, he called Phil and told him to arrange for the Canadian authorities to carefully remove the jet and to prepare it for shipment to Enterprises. "On second thought, Phil, ask them if they would allow the FAA to work jointly with them to try to figure out why the stabilizer tore off like it did."

That evening following a dinner of turkey breast, homemade corn bread and sausage dressing and candied sweet potatoes, Tom and his family lounged in the spacious Swift living room discussing the events of the past two days. Tom was careful to edit the events so as to not worry his mother or sister with too many details.

Sandy looked at Tom and asked him, "So, what do we do next, big brother?"

"What do you mean, dear?" their mother asked.

"I mean, Tom is okay, and the project is moving ahead and all. Isn't it?" Tom nodded. "And you never got a signal from the test OzoNut?" Tom shook his head. "Well then, so you've lost one of the doughnuts and the tower in Magurro was stolen, but you know who took it and they are evidently dead. I say it's time we went back and finished saving those people!" Sandy nodded her head totally convinced that she had just provided the answer.

"Honey," her father said, "we have to play politics a bit in the Magurro situation. As for the 'doughnut' at the South Pole, I think I may have come up with a partial solution to the vulnerability issue." He looked over at Tom. "We know that the Tomasite plastic of the air envelope keeps radar from tracking them, and we're pretty sure

that the minimal heat signature from the solar panels is only detectable from above...”

Cutting in, Tom stated, “...and there is no indication that the missile that destroyed the first one ever went above it.”

“Correct. So, the only thing I can think of is that our enemy has figured out they could track the electromagnetic currents created by the ozone generating vanes or even just the metal in the vanes.”

Tom thought this over for a moment, then asked, “But what can we do about that? That’s the whole point of the Revivicators.”

“Correct, again. But they are currently exposed to direct observation from below. What if you fit a thin, shaped Tomasite shield under them? Not enough to impede the air flow, but enough to direct it to the sides and to cover any direct visibility of the vanes?”

Tom’s eyes widened. “Gee, Dad. That’s it! It wouldn’t do anything to the air flow except spread it out a bit—which could be a good thing—and it wouldn’t affect the flight characteristics either. But, it sure would foil detection!”

Tom’s mother and sister looked knowingly at each other, got up and silently left the room, leaving father and son to discuss the matter privately.

The following morning, Tom—now totally refreshed and recovered from his ordeal—came down to breakfast. Almost tripping over his own feet, he saw Bashalli sitting at the table in conversation with Sandy. Noticing him, the girls giggled and stopped talking to each other.

“Good morning, dear brother,” Sandy said.

“An exceptionally good morning to you, dear Thomas,” said Bashalli, her dark eyes sparkling and a large smile on her face.

Taking a deep breath, Tom entered and said, “Hey you two. I’m glad I didn’t come down in my pajamas... didn’t know we had company—” He looked at Bash, still smiling at him, and said in a softer tone, “But I’m really glad you’re here, Bash. You come to see Sandy?” he asked, trying to sound innocently intrigued.

Winking at Tom’s sister, Bash said, “Oh, yes. Of course. I came to speak with Sandy. You are just a bonus!”

Again, both girls giggled.

“We’re planning to kidnap you and Bud for a nice dinner and a movie tonight. If necessary, handcuffs and leg-irons will be used to

ensure your participation,” his sister said looking sternly at him. “So, will you come along peacefully, or do we need to get rough with you two?”

“Well, Bud may be a problem. You know how devoted he is to his experiments at Swift Enterprises. Working late at night... forgetting about everything else?” He faltered as the girls began giggling again. “Okay. I’ll inform our young Budworth Barclay that two mysterious women are awaiting our presence at... what time and where?”

“Here and at 6:00 p.m. exactly!”

The three had a pleasant breakfast prepared by Mrs. Swift. Excusing himself afterward, Tom left for his office.

Once there he settled into his chair, made a quick call to Arv Hanson, and sat back to await the model maker and engineer. He made a few sketches of possible shields.

Arv arrived about a quarter hour later. They sat down at Tom’s CAD computer where Tom had already called up the final design drawings of the Revivicator. Explaining what he and his father had discussed the previous evening, he pointed at the screen. “Potentially, just hanging this shield underneath—with at least ten inches of clearance for the air to flow through—should keep anything within an arc of about a hundred twenty degrees below from being able to detect the ionizing vanes.”

“What about the twenty degrees or so around the perimeter where the air flows out? The bottom of the vane snake is low enough that it would be visible on the opposite side of the ring from where ever someone might look.”

Tom thought for a moment, rubbing his chin as he did when pondering an important question. Snapping his fingers he said, “We can’t move the vanes up enough without some of the electronics package or cleaning mechanism becoming visible from directly to the side, so why don’t we just make the ring taller? In fact, if we made the ring about five inches taller we could also increase surface area for the vane slightly.”

Arv pulled out a scientific calculator he used to determine many of the engineering issues that arose in any project. Quickly punching in a series of figures, referring to Tom’s screen for some dimensional data, he calculated the necessary answers.

“Tom, except for an inch or so, you have it! I show that changing the ring from its current height by about four inches and reducing the overall diameter of the ring by nine inches would allow us to not only ‘hide’ the vanes from prying eyes, it would actually allow us to

increase the effectiveness of the flow-through by more than eighteen percent.”

“Do the weight differences compute?” asked Tom. He believed his quick, mental arithmetic would check out.

Arv nodded adding, “Sure. Even with a reduced diameter, the increase in height of the ring means about five percent more internal area that allows for more pure helium. That means you could add an extra small solar battery for more power.”

“Or, even some tracking equipment in case of a future attack,” Tom muttered, almost to himself. “You need to come over to the Barn to see the new security drone we’re building. I’m pretty sure we can build a group of about two dozen of them and completely cover the entire area filled with OzoNuts!”

Arv left promising Tom to fabricate both a new ring as well as the slightly cone-shaped shield, and Tom promised to head to the Barn later that day. Tom made an immediate call to the electronic fabrication shop and explained his needs for the new, taller ionization array. The supervisor took a few notes and told the inventor that they would be able to turn out the working prototype by the following afternoon.

He was hard at work on an improvement in his water extractor’s filtration system when a call came through for him. “Tom,” his secretary, Munford Trent said, “One of those people from Germany is on the phone along with a Senator Grimsby. They want your father but he is in a meeting and left word to only be disturbed if the world was coming to an end.” Tom smiled hearing this. “Can you take it?”

“Sure.” He waited for a few seconds and then the phone rang. Picking it up, he said, “Hello. Tom Swift here.”

“Damon? Are you there?” came the gruff voice of the mid-western senator.

“No, Senator. My father is unavailable at this moment, but has asked that I handle any calls coming in for him. How may I be of assistance?”

“Hmmm...” said the Senator. “I have mister—I mean *Herr*—Oberholtzer on the line with me—”

“Good afternoon young Tom Swift. I trust we find you well,” the man interjected.

“Yes. Good evening, Herr Oberholtzer,” Tom replied.

“Well, yes. Pleasantries aside, Swift, this is a matter of vital

importance. Absolutely vital!” the senator rumbled. “Your father may just want to excuse himself from whatever he is doing and get on the phone right now!”

“Senator? My father is in conference with the vice president right now and will soon be speaking with the president. Would you have me ask him to cut that call off?” Tom bluffed, knowing that his father was actually in conference with several members of the FBI on a security matter regarding the Swift’s New Mexico nuclear plant, the Citadel.

“Oh... no... I guess I can’t ask that,” Senator Grimsby muttered, his initial bravado seeming to deflate. “Anyway, Herr Oberholtzer called my office a few moments ago regarding this whole South American venture you are involved in. There’s been a major leak in information and Herr Oberholtzer thinks it is coming from your outfit!”

“Well, Senator. If I may correct you,” the German broke in, “first it is the South Pole. The Antarctic, you know? Secondly I merely stated that we have determined that there has been a leak in the data chain that we cannot trace to any local—by that I mean European—source. And, Tom, since your organization is the other primary agency involved in this, I asked the Senator to work with me to prioritize your assistance in this matter.”

“I see. Have you any proof that a leak might be coming from Swift Enterprises, Herr Oberholtzer? Senator?” Tom asked, beginning to become annoyed at the senator’s accusatory attitude. “Or, are you grasping at straws?”

“Straws? Why you insolent pup!” the senator exclaimed. “Just who do you think...”

“Senator,” cut in the German. “Now that I think of it, your very office is heavily involved in the transfer of data regarding the project. Have you recently checked the security of your own organization?” Herr Oberholtzer asked.

Sputtering with indignation, the senator attempted to formulate an answer to the man’s question. “Well,” he began, “that is... I mean... my people are above suspicion. Above suspicion, do you hear!”

“Certainly, but would you be so kind as to forward the security checks for everyone on your staff? We will verify your assertion for ourselves. For now, Tom, can you please have your security chief, Mr. Ames, contact my office? I should like to discuss possible measures with him. Somewhere between Swift Enterprises and our

offices, information is being siphoned. It is highly encrypted, so I doubt that it is being intercepted electronically. They wouldn't have the 256-bit decryption capability or even a starting code base on which to begin any decryption scheme."

"I totally agree, Herr Oberholtzer," Tom said. "And, Senator? Although I may have been inappropriate in my choice of words, I do stand by my question. Does your office have any provable reason to point a finger at Swift Enterprises? If you do, we need to know exactly what the source of your suspicion is, or the nature of any information you might have regarding our security."

"Well," the senator grumbled, "I certainly defer to Herr Oberholtzer on his faith in your company and its methods of transmitting data. But, I insist that all communications come through my offices. All! Both ways! Nothing directly sent from either of you to the other. Is that clear?"

"Senator," Herr Oberholtzer inquired, "while I think I can imagine the source of your reasoning, I must point out that if our leak is, indeed, from within *your* organization, then you are asking us to... what is it you say? Not only open the door of the barn wider but to actually slap the horse on its hindquarters to make it run away faster. Do you see?"

The senator let out a snort. "Nah! Bad analogy. I just want us to be sure that everything going each way has been officially tracked. Then our boys can trace any leaks on either side of my office. I trust my people but I can't say I feel the same for either of your organizations!"

Both Tom and Herr Oberholtzer found themselves at a loss for words.

Finally, Tom said, "Senator Grimsby. Swift Enterprises is indebted to the U.S. Government for its support over the years, but I will need to discuss whether we will immediately enact your *request* with both my father and our legal department before I can commit. I hope Herr Oberholtzer understands."

"Then I hope you understand," the senator stated, yelling into the phone, "that until we pin down this security leak, your Swift Enterprises is hereby ordered to cease any and all government-paid work you are doing on these environmental issues and you will consider yourself grounded so far as any international trips until further notice!"

CHAPTER 17 /

UP IN THE AIR

LATER THAT AFTERNOON, Tom sat in the office he and his father shared, sitting in one of the large, comfortable leather lounge chairs. He was deep in thought when Mr. Swift walked in.

“Oh. Hey, Dad. I need your ear for a little bit.”

“What can I help you with, son?”

Tom related the conversation with Herr Oberholtzer and Senator Grimsby. When he mentioned the accusations coming from the senator’s offices Tom’s father reddened and appeared to be getting quite angry.

“That hot-air-filled moron!” he exclaimed. “Grimsby has been a thorn in the side of Swift Enterprises for years. Ever since his old company, GrimsbyTronics, lost out on a government contract to us. He claimed that it sent his company into bankruptcy, but that seemed to be a cover for his own mismanagement and his political ambitions!”

He went on describing several instances when the senator had voted against issuing contracts to the Swifts, even when his had been the only dissenting vote. The senator always pointed out areas he termed, “great flaws in the Swift way of doing things,” and was often chided by his fellow legislators over his outlandish claims.

“He really carries a grudge, then,” remarked Tom. His father only nodded.

“Let me make a call to one of our more reasonable members of Congress,” Damon Swift suggested. “I think that I know someone who will not only overrule anything Grimsby might try to do to hinder our work, but she will also put him in his place!”

Tom excused himself and headed to the Barn. He was amazed and pleased to see the first two of the new drones practically complete. Arv came over to see him.

“Pretty nice, huh?”

“They’re real works of art, Arv,” Tom replied. “Sleeker than the current drones and even better than my rough designs. One question, though. I thought we were outfitting these with some ultra-fast interceptor missiles outfitted with landing forcers.”

The engineer described how each drone carried four such missiles

with a thirty-mile range. They were to be carried inside of the drone and only brought out when ready to fire. He pressed a sequence on a control box. Tom gasped.

“They just pop right out! Wow! How long does it take to get them on their way?”

“Less than two seconds, skipper. Once they do their trick with any incoming aircraft or missile they pop out a parachute and float to the ground.”

“Can they take the enemy aircraft all the way to the ground?” Tom inquired.

“No. But we don’t think that will be necessary or even advisable. With no landing field down there we might be forcing aircraft into crash landings! Besides, missiles just need to be interfered with enough to drive them off course and use up all of their fuel. And, they should shake up any pilot who suddenly finds themselves out of control, even for just a few seconds.”

Tom agreed that this was going to be a great use of the technology. “How long can the drones stay aloft?”

“A little over thirty-six hours, Tom. Then they will return to a main landing field probably near the center of the ozone field, for a quick refueling and then back up.”

After a few more questions, Tom slapped the engineer on the back and left heading for the Swift Construction Company in one of the micro cars kept for employee use. As he neared the main gate of Enterprises, he spotted Bud coming through the employee entrance and followed him to the edge of the closest parking lot. Stopping, he called out, “Hey. Bud! Hop in.”

“Where are we headed, Tom,” he asked as he tossed the athletic bag he had been carrying into the back cargo area and climbing into the small car.

“Going over to see the new *Sky*... ah... well, the new aircraft.”

“Still haven’t come up with a name for her?” Bud asked.

“Not yet,” Tom replied scratching his jaw in thought. “I don’t want to call her the *Sky Queen II*. Too much confusion... and it would just be silly calling her the *Sky King*, you know, because of that TV program years ago...” he trailed off looking over Bud’s shoulder.

Bud turned trying to see what Tom might be looking at. Seeing nothing, he turned back, saying, “So, Genius boy? Any other candidates?”

Tom focused back on Bud. “You usually come up with some horrible pun name about this point. What do *you* think we should call her?”

Now it was Bud’s turn to scratch his own jaw and to look past Tom. After a moment he said, “She’s a real magician of the sky. Presto-chango and she’s a huge cargo jet. Abracadabra and she is a supersonic hospital. Hocus-pocus and she is practically anything else you can imagine.” He stopped. Pursing his lips he added, “She may be a he, you know?”

“How’s that?” asked Tom.

“Well... it is a magical aircraft. There are no really famous female magicians. Just men. And the man I always think of when I think of magic is Merlin. Could this be The Merlin?”

Tom looked bemused. It wasn’t often that neither he nor Bud could come up with a solid name for one of Tom’s inventions. He understood Bud’s reference to the famous medieval magician but didn’t think he should break with tradition by giving the new aircraft a male name. He told Bud his thoughts.

“Well then,” came Bud’s reply, “you’re going to have to call her the Lego Express then. Snap a few pieces together and you have one configuration, take them out and snap in a few others...” He sat back looking at Tom.

They discussed the matter a few minutes more and could not come to any satisfactory conclusion as to the name.

After passing through the security gate, Tom steered over to the massive hangar where the original *Sky Queen* and now this new super ship were constructed. Both he and Bud looked at the giant ship in awe, Tom’s gaze going from one end to the other while Bud just looked at the center module, whistling.

“Wow!

“She’s something, isn’t she?” Tom asked.

“Something? *Something?* She’s just about everything!” Bud said.

The two teens walked over to the new aircraft and then around the whole thing. Tom pointed out several details that he thought Bud might need to know in the future, like the override controls for detaching the different modules and the emergency lock-out keypads that were located on both sides of the main fuselage.

“What are those for?” Bud asked.

“In case you find yourself outside the ship and the bad guys are

either inside or about to get inside of her. Press the right key sequence and all hatches lock, the electrical system disengages and the entire ship goes ‘dead.’”

“Oh... so nobody can sneak in and take her?”

“That’s right. Even if we need to leave her somewhere supposedly safe, like when we left the *Sky Queen* at that military base in South America when we were testing her out. We should be able to trust military people, but that doesn’t mean that they aren’t subject to terrorists or even curious or disgruntled servicemen. This just makes sure that only we can get into the ship. I’m going to have the *Sky Queen* outfitted with them in a few weeks.”

Bud could appreciate the feature and said so. The subject turned back to possible names.

Tom admitted that he was stumped, but he suggested that he would bring up the subject with his family that evening. The two boys headed out of the hangar and back to the micro-car, and then they returned to Swift Enterprises. Tom let Bud off at the employee gym before returning to his underground lab.

Soon, he received a call from Phil Radnor.

“What’s up, Rad?” Tom asked.

“I’ve got a couple pieces of news for you. Want to hear the bad news or the turned out to be not-so-bad news?”

Tom asked for the bad news first.

“Interpol just let the FBI know that the man responsible for Bud being taken hostage along with at least one other man were spotted passing through Paris this morning. They headed out on a private jet for Yemen before authorities could get them. The main guy has diplomatic immunity, but we can’t find out why.”

“Nuts,” exclaimed Tom. “What’s the other news?”

“Two other pieces, Tom. The two young wanna-be’s we caught have talked. They had hinted at a terrorist cell here on the East coast, and it turned out to be true. Just not a very well organized cell. The FBI got a phone number out of them and were able to trace it to a house near Washington. They swooped in and captured five Arabic men. Three from Yemen and two from Qatar.”

“Do they have any idea why they were targeting us?”

“It seems that creating havoc in any large American corporation is the aim of this group. Guess we were just the handiest. Their capture might even lead to other cells. Wes Norris said to tell you

‘thanks!’”

“What’s the final thing?” asked Tom. “I could use more good news right about now.”

“The FAA got all the pieces of your jet back from Canada and almost immediately found what was a probable cause. It looks like an internal bolt meant to hold down the front of the vertical stabilizer had been replaced with a slightly too small one. It only could have happened at the Construction Company since that area gets sealed.”

Tom whistled. “Any idea how that happened?”

“Yeah. We traced the fuselage number to the specific shift and the individual responsible for installing those bolts. A young aero-engineer named Amy Deardorff. Harlan confronted her and she broke down. She’s in the hospital right now and the doctors think she must have had a nervous collapse. It could be weeks before we can talk to her.”

“Do you or Harlan think it was on purpose, Phil?”

“No. We don’t. We do think that she realized that her action almost cost you your life and was already so close to the edge that Harl’s visit today pushed her over. Complete breakdown.”

Tom suggested that it would have been impossible for anyone to know what jet built months earlier, would be used by who so it could not have been an attempt on Tom’s life. “Let’s see what she says once she gets better.”

That evening over a wonderful dinner prepared by Mrs. Swift, Tom brought up the subject of the new aircraft. He told them of his thoughts and the names Bud had come up with. They agreed that it was a difficult task coming up with the appropriate name for her. Tom’s mother suggested that they go into the other room and use the computer to search for names of female magicians.

The search engine immediately brought up over a quarter million possible ‘hits’ but the first one seemed to doom their search from the start. It simply said, “I can’t think of a single famous female magician; one that people from many different parts of the world would recognize. What a pity...”

Sandy said, “Maybe, big brother, she needs to be named something else entirely.”

Tom agreed. “But what, San?”

“Hmm? Well, with the Repelatron lifters she can hover just about silently, right?” Everyone agreed. “And, she is mostly silver... could

you call her the Silver Ghost?”

Her father came to Tom’s rescue. “Honey. I’m not sure that people would want to be told that a huge silver ghost was being sent to assist them. It might put some people, even some cultures, off.”

Sandy looked down in sadness and then brightened. “How about Silver Streak?”

“Dear. That was an old movie name,” her mother said.

“Okay. Last one. Silver Eagle,” Sandy said dejectedly.

Sensing her great disappointment at not being able to come up with a suitable name, Tom put a hand on her shoulder. “San... at least for now I think that the Eagle is part of a fine name for her. After all, eagles can be female.”

“Wasn’t the Eagle the name of the first moon lander?” Mrs. Swift added.

Sandy hugged her brother and thanked him. “I know you’ll come up with a better name soon, but thanks for calling her the Eagle for now.”

Mrs. Swift left the living room to prepare the dessert. After eating her concoction of chocolate ice cream, strawberry sorbet and caramel sauce, they all settled down to watch a little television before heading off to bed.

Tom tossed and turned for almost two hours, his head filled with all of the details of the impending release of the OzoNuts. There were so many details to cover, so much to do.

Finally, he fell into a deep sleep.

The following morning he was immersed in thought at his desk in the underground hangar when he heard the clatter of one of Chow’s food carts coming across the main floor.

The door opened and Chow walked in pushing the silver cart and looking slightly perturbed.

“Hey, Chow. What’s the matter?”

“Wahl,” he muttered, “it’s this gol danged wobbly wheel. Been this way ever since that mad Russian relief cook ran it over a speed bump in the parking lot. Sidewinder-ski!”

Tom had to laugh in spite of himself. He knew that Chow wasn’t very fond of his alternate shift assistant whose ideas about food were as different as the East and West during the cold war.

“I’m stumped ‘bout making it work right,” Chow admitted. “I

bend the wheel one way and the first problem goes, then jest when I think I got it, the danged wobble starts on the other side.”

Looking at the slight desperation on the older man’s face, Tom suggested, “Why don’t you let me have it for an hour or so. I’ll bet I can get it back to non-wobble condition. That is, if you have anything good to eat there; I’m hungry enough to eat one of your weird experimental dishes!”

“Now jest a doggone minute there, youngin’,” Chow sputtered. “I got me a nice plate of roasty beef san’wiches for ya. Warm, smothered in a cheese and horseradish sauce with all the fixin’s.”

“I’ll take it,” the young inventor said.

As the former Texas chuck wagon chef was serving up the dishes on an auxiliary table in one corner of the lab, Tom sat there looking at him. Noticing his young friend’s look, Chow asked, “What’s on yer mind, Tom?”

“Well, Chow. I’ve got a problem and maybe you can help me. Have you seen the new bigger and better version of the *Sky Queen* we’re building over at the Construction Company?”

Chow admitted that he had been there just the previous day visiting with a friend who worked in the parts fabrication department, and that they had wandered over so that he could see the plane.

“She’s a real beaut, Tom, and that’s for darned sure! Makes the old plane look more like a Sky Princess and this one a real Super Queen!”

Tom’s jaw almost dropped to the floor. “Chow!” he practical yelled. “That’s it! The *Super Queen*. That’s perfect. Ah, Chow... you’re a real jewel.”

Seeing how pleased Tom was, Chow puffed his chest out and beamed, “Tom? Ya really think that’s a good name? I mean, I know sometimes I try to help with namin’ some of your contraptions, but that’s usually the small stuff. You really thinkin’ to name her the *Super Queen*?”

“Guaranteed, pardner,” Tom said, smiling at the proud cook. “Consider her to be the *Super Queen* from this moment on.”

“You make ole Chow a mighty proud man, Tom. I jest hope she’s got a bigger galley than the *Sky Queen*. A bit more room to swing my bay window around,” he said patting his belly.

As Chow left, whistling even louder than before, Tom placed a call to the construction floor. Reaching the construction manager he

said, “We’ve come up with the official name. Can you get it painted on the fuselage today or tomorrow?”

After being assured that it was possible he gave the new name to the supervisor. “Hey! I like it, Tom,” he replied. “You always come up with great names.”

“We can thank Chow Winker for this one. We may build more than one, so the series will be named Sky Eagle.” He knew his sister would be happy.

After discussing a few details of the construction process and the timeline, he rang off.

CHAPTER 18 /

EVERY CLOUD HAS ONE

“GREAT JUMPIN’ horny toads, Tom,” Chow said as they walked together across the tarmac later that afternoon. Tom had just finished telling the cook of the naming honor. Chow’s initial smile had suddenly turned into a twisted grimace.

“I’m gettin’ me all sorts of little prickly pokes from this here shirt o’ mine from them natives back in Africa.” They paused and Tom reached out to touch the shirt. A small spark arced between the shirt and Tom’s finger. Amazed, Tom tried the experiment again. Again, and at the same part of the shirt, he received a slight shock.

“Chow,” he said amazed. “I think that somehow the coloring minerals they used to make the fabric is turning the bright sunlight here into electricity. Can I borrow the shirt for a day or two to try a few tests?”

“Shore can, Tom,” Chow said looking relieved. “Let’s get me outa the sun real quick and I’ll shuck this electric eel of a shirt!”

They soon entered the main building where Chow went to his kitchen and changed out of the bright green African shirt and into one of his regular, loudly-colored numbers. He brought the shirt to Tom’s laboratory. “Here ya go. I’d appreciate it if’n you wouldn’t cut it up or nothin’. I really like it even if I kin only wear it indoors.”

Tom assured the older man he wouldn’t make so much as a pin prick in the shirt and should be able to return it the following day. When Chow left, Tom set to work making test after test of the shirt’s amazing properties. He even found a minute piece of the raw mineral in a seam and carefully removed it for spectroscopic analysis.

On seeing the readout from the spectroscope he let out a long whistle punctuated by a whoop of glee. He immediately phoned his father asking if the older scientist had a few spare moments to come to the lab. Minutes later, Damon Swift entered the lab.

“So, what’s all this about?”

Settling himself down, Tom took a breath and asked, “Dad? How many elements are there?”

“Well, if you include all the theoretical ones, that would mean a total of one hundred twenty-three. Right?”

“If what I believe is true, I’ve just found number 124! And,

because of its atomic characteristics, it really should fit in between Yttrium and Zirconium on the Periodic Table of Elements.”

“Where in the world...” his father began.

“In Africa, Dad. See that shirt on my desk? It has been dyed with a mineral that President Latumba’s people dig up in their jungle, pound into a fine powder and then mix with brackish water they extract from a plant. They soak their raw fabric in it for a day or so then dry it in the sun. I was able to extract a sample and analyzed it. It isn’t a mineral. It isn’t even a molecule. It is completely unknown element.”

“My god, Tom. That’s incredible. Can we get more to analyze? We need to be sure before we spring it on the world.”

With a hint of sadness in his voice, Tom replied, “Dad, I’m not sure that we *can* let the world know. At least not right now. If it were known that Magurro was the source—possibly the only source—of this, they would be set upon by the world. And with their tricky position and lack of protection, they would be prey for any unscrupulous factions, even their neighbors.”

“Oh, yes. I see what you mean.”

“Anyway, I would like to name it in honor of their president. Maybe ‘Latumbrium’ or something like that?”

Mr. Swift agreed that it was a fine name. “I only hope that we can one day introduce the world to Latumbrium, Tom.”

Tom radioed the cargo jet currently on the tarmac in Magurro’s capital city. The crew’s co-pilot, Zimby Cox, answered. “Hey, Zim? I need a favor,” Tom told him.

He described the kind of shirts and the mineral that made them a brilliant green. He asked the Enterprises man to contact the president and request a kilogram or so of the mineral, assuming that they could spare that much. “Tell him we will pay for it and pay the people who dig it up.”

Less than an hour later Tom received a return call from Cox. “Skipper? The president says that you can have several buckets full. How much do you need?”

“One bucket will be sufficient, Zim. What do we owe them?”

“He said to tell you that it would be an insult for you to ask to pay them. He said, and I quote, ‘we will never be able to repay Tom Swift and your people for saving our lives. We must not speak of payments from you to us for anything’. That’s what he said.”

Cox informed Tom that the 'bucket' of the mineral would be delivered to the cargo plane before its take-off the following day. It would be at Enterprises within twenty-six hours.

"Oh, skipper? I have the Major from the UN detachment here. He wants a word."

"Mr. Swift. This is Major Denby. I recently relieved the previous commander of the detachment here in Magurro. We just received word from our field investigators that they have positively identified one of the bodies at that site up in Wahlotra where your equipment was destroyed. It was General Abu Ramsay!"

"Are your people absolutely sure about that?" Tom asked, quite stunned at the news.

"One hundred percent sure. We had his DNA on file from when he was a lieutenant in the Yemeni army. Before he and about a hundred followers deserted and took over the government of the nation to the North. They took over through systematic murder and imprisonment of the government and small military there."

"Does the UN plan to go in to maintain stability, sir?"

"Doesn't seem necessary. Now they know Abu Ramsay is dead they have requested that their nation be allowed to reunite with Magurro, and to have President Latumba become their president as well."

He went on to describe the assistance the UN would be able to make and asked that Tom please continue with his project to provide the water collectors to all of the villages plus a handful to the new territories in the few places where water was in short supply.

Following the call, Tom phoned his father to give him the news.

"I had actually heard about the combining of the nations under President Latumba from one of our State Department contacts," Tom's father surprised him. "We have been provided an emergency grant to produce as many ERBs as necessary to support the efforts and to continue our road building project as well."

Two days later Tom had the container of Latumbrium in front of him in his private lab. All test showed enormous promise for the mineral element. The most exciting one tied in with Chow's experience with his shirt.

"It's amazing, Bud. A thin coating, only about ten atoms thick, is enough to absorb the sun's rays and turn it into electricity."

"Is Chow going to be Mister Electricity, then?"

“No. He’s letting my Mom turn it into a short-sleeved shirt and to line the collar. Then, he’ll just need to wear an undershirt to block skin contact,” Tom replied.

“Okay... but we’ve had photovoltaic panels for years and years. What’s the big deal?”

Tom pointed at a green plastic sheet about the size of a paperback book sitting under a small lamp. Connected to it by two small wires was a fan that was spinning at top speed. “The big deal is that the Latumbrium panels can be made thinner so they weigh about eighty percent less, could cost about one-third to manufacture and not only provide more than three times the electrical output but they produce power even in low light where traditional PV panels can’t.”

“So, what are you going to do first?” his pal asked.

“First, I am turning this container of Latumbrium into enough solar panels to power our first fifty or so Revivicators. The drastic drop in weight plus the increase in power means that we can build in a set of higher-powered ionization vanes into each one. Double the cleanup and double the ozone!”

He explained that the thin wafer of the mineral could be rolled out into any size or shape and then sandwiched between thin layers of clear Tomasite plastic. Once wires were inserted into opposite corners and the edges sealed, the cells should even be able to operate and produce electricity—even underwater—just as long as there was enough sunshine penetrating to make them work.

“That would be a real boon to your father’s undersea garden off of Fearing Island,” Bud said, referring to the plot of seabed that was used to grow both the exotic plants that provided a key ingredient for the making of Tomasite as well as a flourishing colony of plants that originally came to Earth by rocket from the Swift’s outer space friends.

“Right,” replied Tom. “Dad has said that he believed that the plants would do much better if they had twice the length of daylight, and at a couple wavelengths that just don’t penetrate the water very well. This way, he should be able to set up special lights to provide what the sun can’t!”

Tom phoned his father as Bud left to make a test flight of a newly-built *Pigeon Special* due to be delivered to the local Air National Guard the following day. Damon Swift was enthusiastic at hearing the news. He asked Tom if there would be enough of the new mineral element to make a test panel for the undersea garden. Tom promised him that he would have one made that very day. “If my

calculations prove out, a three foot by five foot panel should make about thirty-five volts at around a hundred fifty watts of power. I'll ask the electronics guys to rig up the necessary gear to turn that into one-twenty volts for you. Will that give you enough power for your lights?"

Mr. Swift agreed that it would be quite sufficient for test purposes and said he would arrange for the panel and lights to be installed within a few days.

Tom spent the following five days preparing for a flight to the Antarctic to launch his first working Revivicator. It would be rolling off of the assembly table in the Barn the day prior to departure. He was anxious to get it into the *Sky Queen* and to release it into the air over the frozen southern continent.

He would also release their first drone for a three-hour test. It would be recaptured and brought back to Shopton for a check-up and to be fitted with its intercept missiles.

On the day of departure, Tom gathered the crew that would accompany him: Bud, Hank Sterling, Arv Hanson, Slim Davis and Zimby Cox. The men were getting ready to enter the giant aircraft when Sandy's small convertible pulled up. She and Bashalli popped out of it, big smiles on their faces and each with a picnic basket.

"Daddy said that we could go with you, Tom," she said, "as long as you agree. Please? Can we go?"

She and Bashalli both batted their eyelashes at Tom with the pretty Pakistani girl coming up to Tom and giving him a warm hug.

"Hey, Bud." Tom said. "Do we take them or leave them here?"

Bud pretended to ponder the situation, scratching his chin. Sandy and Bashalli took this for about half a minute and then Sandy let out a little mock scream of disgust putting her hands on her hips. "Tom Swift. Just you stop this. Unless you have a pretty darn good reason for leaving us, Bashi and I are walking up those stairs right now!"

"Guess we're beaten, Bud. On you go, ladies," Tom said bowing toward the waiting *Sky Queen*.

Now both girls let out little squeaks of delight and they practically ran to the huge jet.

The flight south went smoothly with Sandy taking a turn at the controls for about three hours. "Got to keep up my rating," she told Bashalli. "Daddy and Tom say I need to have at least five hours in each of the different aircraft we build at Enterprises every month."

"And, you do not find it at all exciting or pleasurable," stated the

dark-haired Pakistani trying to keep a straight face but only managing to stifle a giggle for about three seconds.

On arrival at the designated area where Tom intended to release the Revivicator he decided to set the Flying Lab down on the ice and snow below. They would all spend a fairly relaxing evening and night on the ground and then make the release the following morning.

He radioed back to Shopton to tell them of his decision. As he was about to sign off, Bud came rushing into the radio room.

“Tom,” he gasped out of breath. “It’s that jet again. Only this time it has company!”

“What?” Tom cried. “How many?”

“I saw at least four, maybe five of them. And, this time they aren’t staying miles to the south. These flew past really low and less than a half mile away!”

Tom asked the radio operator at Enterprises to hold on while he went outside. By the time he and Bud got there, there was no sign of the mystery jets.

Sandy and Bashalli were standing with Hank and were talking about the sighting. “Oh, Tom. It was so exciting,” she gushed. “They flew by in perfect formation. A real precision job.”

Tom told the girls about previous encounters and his nervousness about their being in the vicinity of the *Sky Queen* on both visits to the Antarctic.

Hank added, “Tom, I think those were MIGs. They were close enough to see that they bear no markings, but I’ve seen enough of those Russian jets to recognize one when I see it. Or, them. I counted at least six in the formation!”

Tom returned to the radio and informed Enterprises of the appearance of the flight of the former Soviet fighters. After being assured that the information would be passed along to the State Department immediately he ended the call.

The evening and night passed without incident and Tom and his crew were up and eating breakfast by 7:00 a.m. Shopton time. “Too bad we didn’t bring Chow along,” Arv mentioned. “He may come up with some strange concoctions, but he does a slap-up breakfast!”

Tom and Arv made a final inspection of the OzoNut. It had been transported deflated so Tom pumped in the required amount of pure helium gathered from the Swift’s helium wells.

The OzoNut took its puffed-out shape within a minute and was soon at capacity. Tom activated the solar battery set checking their individual and combined output. He then checked out the drone. It, too, was fully operational. Everything looked fine so Tom headed up to the cockpit and soon had the *Queen* zooming skyward.

As they neared the altitude band of low winds Tom slowed their ascent. He didn't want to enter the area at a high speed and stir up the air in the release area. They finally reached 77,500 feet, the altitude that Tom and his father's calculations showed to be the most advantageous for the initial test.

Tom asked Hank to take over the controls while he and the girls headed back to the hangar.

Before getting there, Tom had the girls return to their shared quarters to change into high-altitude suits necessary for working in the hangar at this altitude once the huge doors were opened.

They arrived five minutes later, helmets under their arms. Bashalli saluted, saying, "Cadets Prandit and Swift reporting for duty, sir. Your command is our... uh..." she looked at Sandy for help.

"Our command, oh, brother dear," Sandy concluded.

"Okay, ladies. Helmets on and I'll check the air supplies. Remember that the radios are constantly on once the helmet is secured. You wouldn't want Bud or me to hear any of your private conversations." He described in brief what would be happening once they entered the hangar and opened the doors to the icy upper atmosphere. Each of the five people in the hangar would be attached to a safety umbilical line. These dangled from self-dispensing reels built into the ceiling.

Tom asked that the girls please remain behind the green 'observation' line on the floor while he and the others worked inside of the yellow 'safe' zone. At no time was anybody to venture into the final five feet of the hangar painted in a brilliant red. This 'danger' zone was the only portion of the hangar not protected from any rogue winds blowing past the tail of the aircraft.

Everyone in place, he decompressed the space and opened the huge door of the hangar.

Tom stepped over to the prep area just as Arv was disconnecting a test line from the OzoNut. Pointing at the readout on the portable test panel he told Tom, "We're all green to go, skipper. Power is great. Just the amount of sun peeking in here is enough to activate the solar panel and it is already providing a trickle charge to the batteries."

“Computer program check out?” Tom inquired.

“Perfect. Running smoothly. We ran it through a self-diagnostic as well. It checked out everything... and everything checked out,” Arv replied raising a hand and giving Tom the thumbs-up sign.

“Then, let’s push her out the door.”

“Wait,” Bud said. “Aren’t you going to christen her or anything?”

“Well,” Tom said. “A German by the name of Schonbein first discovered ozone back in the mid-nineteenth century. Want to call her Schonbein, Bud?”

“Uh, well. Maybe we just call it ‘Beanie’ Tom. How about that?”

Everyone heard the giggles of the girls over the radio. “I think it is darling, Tom,” said Sandy. Bashalli agreed.

“Well, then, I hereby christen you Beanie. Long may you float!” With that, Tom released the straps holding it to the transport palette and he and Bud got behind and pushed it to the mouth of the hangar. Giving a final gentle push the OzoNut floated out the back of the *Sky Queen* and into the icy atmosphere.

It hung there for about a minute while the build-in GPS locations equipment computed its exact location and activated the flight pattern program for its assigned area.

Minutes later they had positioned the drone near the hangar doorway. Everyone moved behind a shield near one bulkhead before Tom pressed a remote button. The drone’s small turbojet engine whirled into life and the small aircraft was soon zooming out of the hangar.

After closing the hangar doors and refilling the hangar with warm, breathable air, Tom, Bud and the girls headed out to change into their civilian clothes. Arv offered to re-stow the palette and to close up the hangar. Everyone reached the cockpit within ten minutes.

Hank had already positioned the Flying Lab more than a mile from the OzoNut and Tom had rushed there to begin studying both the output measurements coming from the Revivicator as well as those coming from a laser refractor instrument that could detect the ozone being expelled.

He looked up at Sandy and Bashalli and smiled. “It’s working like a charm,” he said, beaming.

“Oh, Tomonomo,” Sandy said giving her brother a hug and a kiss on his forehead. “I’m so happy for you.”

“And I am a very proud person to know and love the wonderful brother of my best friend,” Bashalli added. Then, realizing what she had just said, she reddened and turned away.

Tom looked at this sister as if silently asking if he heard what he thought he had heard. Sandy merely raised one eyebrow and then winked and grinned at him.

He turned back to his readouts and only heard the two girls leaving when they were down the passageway and talking in hushed tones. Everything was looking as good as or better than he had hoped.

Over the next three hours he and then Hank monitored the OzoNut and the surrounding area especially where it had traveled.

Comparing notes and looking at the progression over the hours, Tom finally announced to the crew that things were going very well.

“We have a noticeable trail of ozone being generated and dispersed by Beanie,” he said and then remembered that he needed to tell everyone of the naming. He continued, “It is still only the most minute amount of measurable particles, but it is out there now and wasn’t before we released the Revivicator. We’ll stay here another couple of hours and then pick it and the drone back up and head home.

Later, Tom was about to leave the cockpit to assist in the recapture of the devices when Slim Davis called out, “Skipper? We’ve got company. Fast and coming from the south. Looks like six high-speed aircraft.”

“Missiles?” Tom asked.

“No. Only doing about six hundred, but in formation and heading this way. They’re below us right now but they’re climbing.”

Tom sat back down at the controls ready to react to whatever might happen.

“Gee, skipper. Something detached from the formation and is heading this way, and I mean fast!”

Tom rammed the throttle forward and the jet lurched ahead. But it was too late. An explosion came from just behind the giant jet rocking the entire fuselage and causing it to buck wildly.

“Where’s the drone?” someone shouted.

Tom managed to gain control just as a message crackled over the radio.

“Swift. Move away from your enemy spying machine. You don’t

have any right to our sovereign air space. Move away or die!”

With that the signal stopped. Tom slowed the aircraft and turned her around on the jet lifters to face back to the area where the OzoNut hung, defenseless.

Tom could only watch in horror as enemy jets streaked more than four miles below the *Sky Queen* launching a pair of missiles toward the OzoNut. Helpless to react in time to steer the clumsy floating machine out of their way he saw the first two missiles streak past the unit giving it a fairly wide berth but close enough that their wake stirred up enough of the air that it practically flipped the OzoNut over on its top.

As it righted itself, the entire cockpit crew could see the MIGs turning far in the distance ready to make another run. About half way back to the OzoNut, one of the MIGs broke out of formation and pointed its nose upward releasing another missile. Although not a direct hit, the warhead exploded near enough that the dynamic pressure waves created buffeted the OzoNut so hard that one side ripped open, and began spinning and tumbling out of control.

The explosion had been near enough to the *Sky Queen* that she vibrated violently as several pieces of shrapnel slammed into the back of the plane.

Tom and his crew watched the monitor in dismay as the frail device suddenly tore apart and plummeted toward the icy Antarctic, below.

CHAPTER 19 /

HOME IN SHAME

WITH NO WARNING—the great plane’s rear RADAR having been damaged in the initial attack—more than twenty jets streaked past on both sides headed directly toward the incoming enemy jets.

“Wow!” cried Bud. “Look at them go!”

Tom, always a bit more cautious than his friend said, “I only got a little look at the tail of one of them. I can’t be sure but it looked like a U.S. Air Force emblem.

“Look at that, Tom,” Bud practically yelled in the inventor’s ear. “Missiles away. That’ll get the bad guys.”

Tom applied thrust to the lifters sending the *Queen* to a higher altitude. As they rose everyone in the cockpit could see the mix of jets and missiles streaking around in tight turns, flips and other dogfight maneuvers.

The small drone aircraft flew by below them a minute too late to help. Tom cancelled its programming and steered it manually away from the action. Without its flight-controlling missiles the drone was merely a target.

While Tom never wanted to see the loss of human life, he nonetheless couldn’t help but be relieved to see, through his binoculars, that two fiery explosions had been enemy aircraft, not American.

The radio crackled and came to life. “Swift jet? This is Major Arkon, USAF. You folks okay up there?”

Tom depressed the mic button on the control joystick. “Major. It’s great hearing your voice. Where do you guys come from?”

“State Department sent us to shadow you. Whatever it is you’re doing, it is top priority that you should succeed. We’ve got a whole flotilla of aircraft out here to assist you. Pardon me for a minute...” the radio went silent and Tom could see a pair of U.S. jets suddenly break off their formation and head toward another jet that was trying to leave the area. Within seconds a trio of missile exhaust trails went streaking from the U.S. jets toward their adversary.

A large ball of flame erupted as they converged on the enemy jet.

“I’m back,” the radio voice stated moments later. “Just had to go after one of them before he could get a bead on any of my pilots.”

“Thank you, Major, but I can’t celebrate with you. Swift Enterprises is always sad at loss of life. Now having said that, I really want to thank all of you for saving ours.”

“Well, sir. I’ve been told to tell you that it is ‘your tax dollars at work’ here.”

Shocked, Tom inquired, “Major? Who specifically gave you that message?”

“Not at liberty to say, sir. Just take care of them we were told. Are you okay? Any damage?”

“We have a little damage to the rear of our aircraft. It doesn’t seem to be in any of the control surfaces. My engineers are back there trying to figure out whether we need to set down for repairs. Can I let you know in a few minutes?”

“Roger,” came the reply.

Tom activated the intercom and called back to Hank Sterling and his men in the aft compartment. They reported that there had been a breach in the hull of the aft end that had penetrated into the primary electronics area—the reason, Tom realized, that their aft radar had stopped functioning. “Any flight damage, Hank?”

“No, skipper. We’re putting an airtight patch in place and have disconnected the electronics bay from the ship’s systems. You should see the back-ups of everything except the radar and the rear coms antenna come on-line in about a minute.”

Tom was about to thank them when Hank came back on the com system. “Uh.... skipper? We’ve just spotted a big problem. It looks like we’ve got a homing beacon that has been attached to the avionics. Not anything I’ve ever seen, but it has an antenna that has been pushed out through a micro-hole in the skin of the jet. Box about two inches wide by ten long and only an inch or so tall.”

Worried, Tom replied, “Anything to suggest that it might be a bomb?”

“No. It just looks like a radio of some sort. I’ve opened it up and it has a circuit board with everything necessary to generate a ultra-low frequency signal.”

“Can you disconnect it?”

“I already did, Tom. Looks to be fairly unsophisticated, but powerful! It has a bank of twelve 9-volt batteries wired in series with a single on/off switch. It’s off right now.”

Tom asked the engineer to bring the box up to his electronics lab

cubicle. Before leaving the cockpit he radioed the waiting air wing commander, thanking them for their help but letting them know that the *Sky Queen* would be proceeding on its own.

Hank climbed into the pilot's seat while Tom headed aft. He supervised the recovery of the drone aircraft and then headed to the second deck and his electronics cubicle.

In the lab he carefully removed the circuit board from the metal case. Although most components were generic or unlabeled, meaning it would be difficult to discover the origin of the homing beacon, he was able to decipher the transmitter circuit enough to get the broadcasting frequency. He would turn it over to Harlan Ames once they returned to Enterprises.

Half an hour later, the micro-hole had been patched with... "Chewing gum, Arv? You sure about that?" he had asked.

Smiling, the model-maker nodded saying that he had learned the trick during his stint in the National Guard. As an aircraft mechanic he was privy to about a hundred short cuts and quick fixes that had been in wide use for decades.

After landing back at the sprawling facility, Tom asked Arv to promise to put in a real, permanent patch as soon as possible. "I'll do it myself, Chief, but I suggest that you go to the National Air and Space Museum and check out the cockpit of their F-111. Port side about directly in line with the front of the air intake. Been there since my air boss put it in about eight years ago. He said it had another 800 hours of flying time before it was decommissioned and added to the museum, gum and all."

Tom smiled, patted the man on the shoulder and walked away heading for the office he shared with his father.

He debriefed his father on the flight including the hidden radio beacon. "I'm sure that's how the missiles homed in on us, Dad," he exclaimed.

His father agreed. They spent the next hour carefully taking the transmitter apart looking for hidden clues as to its origin. Finally, Damon Swift asked, "Do we have any ROM chip reader that might be able to tap into that chip?"

"I don't think so. Looks to be a custom job... wait! That's the clue. We just need to know who makes chips in that configuration and..."

"Whoa, son. Unless I miss my guess, anybody could have purchased that chip from its source. At best we might find a manufacturer's mark on the underside after we unsolder it."

“You’re right. I just got ahead of myself. Sorry. Let me pull that chip off the board and see what’s underneath.”

Tom took out his miniature soldering pen, let it heat up and grabbed a solder sucker from his desk. It was the work of just a few minutes to remove the chip. Neither man was surprised when they found no markings on the chip. “Guess that’s a dead end, huh?” Tom said

“Turn it over to Harlan. Maybe he can figure out where it originated.”

Tom did that later in the afternoon. When he finally returned to the office he was greeted by his efficient secretary. “Hello, Munford,” Tom greeted him.

With an overly dramatic sigh, the secretary said, “Mr. Swift. Please... it is Trent. I *really* prefer to be called Trent.”

Tom smiled knowing how the man felt and apologized. He walked through the door into the shared office. Seeing his father working on a set of calculations, Tom went to his own desk and quietly began making journal entries on his computer.

“It’s that vile Senator Grimsby’s office,” Trent intercom’d moments after Tom had begun writing about the latest attack. “He sounds fit to be tied. Do you want me to tell him neither of you are available right now?”

“No, Trent,” replied Damon Swift. “I’ll take the call right now.”

“It’s Munf... oh, heck...” came the reply before the connection clicked off.

He turned to Tom and said, “Lord knows what he is going to go on about this time. I thought that his run-in with the Chairwoman of the Government Accounting committee would have gotten him off our backsides.”

The phone buzzed, announcing that the call had been transferred. Mr. Swift took a deep breath and picked up the receiver.

“Damon Swift speaking.”

Tom could hear the senator voice as he was practically yelling. His father put it on speakerphone.

“Swift? You’ve really done it this time, you and your son have just about ruined diplomatic relations with several of our friendly Arabic nation governments! You are going to be taken to task for this. You are finally going to get yours after all these years!”

Looking totally nonplussed, Damon Swift counted to ten then

calmly stated, “Senator. Firstly, my son and our crew were viciously attacked by MIG jets operated by terrorists possibly out of one of your so-called friendly nations. The United States Air Force intervened just in time to save them, but our valuable equipment destined to help rebuild the ozone layer down in the Antarctic was destroyed. On purpose I might add! It’s about time that you climbed down off your high horse and started trying to be of some assistance instead of a major hindrance and a pain in—”

“Your feeble attempts to try to wring public monies for your failures is about to come to an end! Nothing your company has done has been a success. Even your touted ozone project has crashed and burned. Failure, that’s what Swift Enterprises means around Washington!”

“Senator Grimsby. Your facts, such as they are, and your assertions are totally false. Our recent environmental projects—”

“Now you just listen here, Swift,” the senator cut in. “In ten minutes I am introducing a bill to curtail your renegade operations. Once and for all, you and your gang will be put under the strictest control the U.S. Government can mete out. I’ll have you paraded around Washington in shame for what you have done!”

Trying to keep a low, even tone to his voice, one that he knew would provide maximum irritation to the renegade senator, Damon said, “Of course, Senator Grimsby, that it your choice. But don’t be surprised if you fall a bit short on your attempt to ruin Swift Enterprises. We have done nothing wrong. At any time. *Nothing* wrong.”

There was a snort of derision from the other end of the line, but he continued before the senator could interrupt, “If anything, it is you and your office that have been a major negative force in recent times. I happen to know that your approval rating from your own state show you at under eleven percent positive approval. If you try to stop our good work, or if anything should happen to my son, my family or my employees because of your dealings, then I will single-handedly destroy you in a court of law!”

“Now you listen here—”

But that was all. Damon Swift had cut off the line. With a smile on his face he turned to Tom. “Think he might get the message?”

Tom let out a long, low whistle. “Gee, Dad. He seems determined to make our lives miserable. Can’t anybody do something about him? I mean, at a top government level?”

“I’ll try making a few more calls to Washington, Tom. Not sure if

it will do any good, but I'll try."

With that, Tom left the office heading to his private lab. Once there he sat in front of his computer trying to think of what he might do. His screen suddenly came to life, dropping out of the password protected screen saver he used to display several pictures of Bud, Sandy and Bashalli.

YO, INVENTOR BOY. TAXMAN HERE.

I SEE THAT YOU HAVE A LITTLE

PROBLEM WITH A BIG, BAD, WOLF.

Tom looked at the screen in wonder trying to figure out how this unknown government agent or group of agents who referred to themselves as 'Collections' always seemed to know what was going on in his life and where Tom was.

He took a breath and then typed:

Yes. You know what we are doing and what we are up against. Thank you, BTW, for the rescue over the South Pole. We lost our equipment, but it could have been worse.

YOUR TAX DOLLARS, ET CETERA...

HAPPY TO BE OF ASSISTANCE.

DO YOU NEED A HOUSE OF BRICKS

TO STAVE OFF THE HUFFING AND

PUFFING?

We could use something. The 'wolf' is beginning to endanger lives. And he has just threatened to introduce legislation that could hurt us... financially for the most part.

NO WORRIES. HE WON'T BE ABLE TO

GET TO THE FLOOR. SOMEHOW, ALL

**OF THE LIGHTS HAVE GONE OUT AT
HIS CAVE. AND, IN THE DARK, NO
ONE CAN HEAR YOU BLUSTER!**

Thanks! But, how long can that work?

**LONG ENOUGH FOR THOSE WHO
SPEND THEIR LIVES HELPING
OTHERS TO HELP THEMSELVES.
GOOD HUNTING!**

Thank you. One other question?

Tom sat in front of the screen for a full 30 seconds before accepting that the Taxman had either signed off, or had no intention of continuing with the conversation.

His intercom beeped, and the blue light on the faceplate indicated that it was from his father. He picked up the receiver. "Hi, Dad."

"Tom," his father almost broke in. "I was just on the phone to one of the friendlier senators and their afternoon session has been called off due to a power outage."

"I know." Tom filled his father in on the recent interchange with Taxman.

"I don't know if this is all good or bad, but it did give me time to talk to Senator Quintana from New Mexico. He told me—off the record, of course—that Grimsby is trying to fight his last stand. He's worn out his welcome in every committee he's ever been on. Nobody respects him... even the president has let it be known of his displeasure at Grimsby's activities and attitude. And his party has notified him they want him to stand down."

"He seems like a man who burns many bridges," Tom admitted. "Where does that leave us?"

"My best guess is that Grimsby will find that any legislation he tries to put forward will not be seconded, so it will die. That doesn't mean he can't and won't try to make things difficult for us, but Senator Quintana told me he was fairly certain he could take the heat off of us, no matter what Grimsby tries.

CHAPTER 20 /

VICTORY SNATCHED FROM DEFEAT

THE DESTRUCTION of the enemy MIGs meant that the *Sky Queen* was finally alone when it reached the skies over Antarctica a week later.

Tom had Slim Davis take over the controls and then headed aft to the hangar where a team of engineers were putting the finishing touches on the first of the production OzoNuts.

“All set, skipper,” one of them stated as he saw Tom enter the hangar. “Bringing these deflated and then pumping the helium in just before launching them means that we can get eighteen at a time in the hangar and then get them inflated, running and tested and out the door at twenty minute intervals.”

“So, we’re ready to launch the first one now?” Tom asked.

“We just need to get into our high-altitude pressure suits and pressure-balance with outside, then it’s ‘go’ for inflation and out the door.”

“Wonderful. Be sure that everyone has a lifeline attached just in case. I’ll be back in five minutes suited up. You and the others do the same while I get us into position.” Tom departed and headed back to the cockpit. Once there he told Slim, “Punch in the first drop point and get us there pronto, Slim. We’re going to be ready to push the first one out in less than eight minutes.”

Slim told him that they were already on their way to the first point and would arrive there in about three minutes.

“Great! Contact Enterprises and let them know we are about to start. I’ll be back there watching the first few launches.”

He left the cockpit and headed to the rear of the plane stopping just long enough in his private quarters to pull on the pressure suit and to grab his clear Tomasite helmet. By the time he returned to the hangar the team of four were already suited up and waiting for his arrival.

Tom sealed the hatch and checked that the auto-lock was activated. Turning to the crew he tested his radio set and asked them to do the same. Following a radio check and a brief description of the safety procedures Tom wanted them to follow, they hooked up their safety lines, depressurized the hangar and opened the large door at the rear.

As the team began the inflation process and electronics test, Tom turned away and activated a second channel on his radio. “Tom to cockpit. Are we there, Slim?”

“Roger, skipper. At point one and holding. There’s about a six-knot wind out there so I’ve turned the *Queen* into it. The OzoNuts will drift back and away from us.”

Taking a deep breath, Tom turned to his crew. The blood rushed out of his face when he saw that one of the men was missing! Tom was about to yell out when the man popped up from behind the first of the OzoNuts. Showing a thumbs up, the man said, “Thought we had a leak, but it was just a bit of extra gas escaping from the pressure-relief valve. She’s ready to go!”

Another of the technicians said, “Electronics check out. She’s powered up and already making some ozone. Can we launch?”

Relieved, Tom gave the go-ahead and the first of the OzoNuts—Tom knew he would never be able to convince people to call them EnvirOzone Revivicators—scooted out the hangar door and drifted away from the aircraft. Seeing a wisp of vapor pouring out of the bottom of the device, he knew that the project was on its way to success.

Over the following six hours the team activated and launched seventeen of the devices. One had a small system problem that Tom believed would best be if fixed back at Enterprises.

They activated and launched the first of the drones. It would patrol the area for the next 36 hours and then be refueled by a Swift cargo jet.

That done, they finally closed the hangar door, re-pressurized the space, and then peeled off their suits.

Tom warmly shook each man’s hand thanking them personally for their help in the first launch. They all went to the lounge area for coffee and cocoa. Tom had already called up to Slim in the cockpit and suggested that they should make haste in returning to Shopton. The *Sky Queen* was rocketing north at top speed even before the team had arrived in the lounge.

The flight home went smoothly with Tom and his launch team napping for more than half of it.

Following a good night’s sleep, Tom made an early start at Enterprises, not even taking the time for the breakfast that Chow brought in around 9:00 a.m. He began by running a series of computations to check their accuracy. Satisfied, he called up screen

after screen of information on the OzoNuts and the status of the construction efforts to build the remaining units.

Finally he called Hank Sterling and asked him to work up a rotation schedule such that several crews would work to continuously fly the *Queen* from Shopton to the Antarctic to release each succeeding group of the machines. Tom's computations had shown that for each three groups of OzoNuts, the *Queen* would need to deliver one of the larger maintenance tenders.

He also ordered the refueling jet be prepared.

"Tom," Hank broke in at one point. "When and how are we going to deliver a tender support base that will remain on the ground?"

"You know that we didn't dismantle the base down there when we used the earth blaster to dig for iron. We turned it over to the five-nation oversight group. They're only using the residence quarters and storage bunker. They have just left the equipment building empty and sealed. Besides, it's only a hundred and eighty miles off from being right in the middle of the OzoNut field."

"Oh, that's right. I'd almost forgotten about it," Hank admitted.

"I've done the maths on it, and the combination of the landing strip there, plus the size of the equipment hangar will be more than enough to accommodate a spare tender, the equipment and supplies to refit each tender as it comes in for its semi-weekly clean-out and resupply, as well as a crew of three or four Enterprise employees to run the thing.

"That means we won't have to take the *Sky Queen* out of its work ferrying the Revivators down there. She can be used to take a new group every other day or so, and we use one of our cargo jets to take the tender equipment and a crew down there."

They spoke about several other issues over the following ten minutes. Finally, Tom rang off with Hank promising to have the crews picked out, the rotation schedule made up, and a set of volunteers for the Antarctic base. They had both agreed that this duty should be purely voluntary and that each team would spend only about 21 days at the base before being spelled by another team.

"Tom!" Bud cried entering the Barn assembly building a day later. "Where did those ugly heaps come from?"

"Those, Bud, are the first two of our tender vehicles for the Revivators. I was just testing them at low altitude to see how they react to varying degrees of wind," Tom said, pointing to a series of wind machines surrounding the area.

“Jetzt! They look like a cross between a giant slug and a mini-blimp. What in the world am I ever going to call them?” the young flier said with a grin.

“Too late, chum. Far too late. Mother came by the other day and saw the first one. She said that the way they will hover around taking care of the little Revivicators is like a kindly old plump nurse. So, she dubbed them *Nightingales!*”

His hands up in mock surrender, Bud said, “I give in to a superior force. Hmm? *Nightingales?* I actually like it. Wish I’d thought of it myself.”

Each of the ungainly aircraft had a flattened blimp-like main body about twice as wide as the Revivicators and perhaps 40% taller and almost three times longer. They were open at both ends. A set of three inflated fins poked out from above and below the main body. Tom explained that the fins were steerable through 360 degrees and would be used to help tack against the wind just like a sailboat. Aided by their electric ducted fan motors, capable of flying the tenders at about 35 knots by themselves, these fins would allow near top speed even against a 10-knot headwind.

“They also give us really improved maneuverability at slow speeds.”

Tom started the preprogrammed sequence that would launch two of the OzoNuts from the edge of the test area and set the *Nightingale* to work maneuvering for best access to the floating ozone devices, taking in each one and performing all the necessary cleaning and refurbishment processes. “Each tender holds enough spare parts and helium to service up to thirty OzoNuts two times. Most visits, they’ll just clean the OzoNut.”

After both OzoNuts had been serviced, Tom looked down at the control panel with a huge smile. “Bud! The tender did its work almost twenty percent faster than I had anticipated. Let’s look at the OzoNuts and see if it performed all its duties.”

The two teens crossed to the area where all three vehicles had settled to the ground. After a thorough check of each device Tom pronounced the results to be “Spectacular!”

He motioned a group of support personnel to give the other *Nightingale* the same tests and then to put everything away. The two boys climbed into the micro car Bud had arrived in, heading back to one of Tom’s lab.

Once there he phoned the Swift Construction Company and gave them the go-ahead to begin production of the *Nightingales*. “Looks

like we're going to need twelve of them to start, but stockpile enough components to double that number in a month or two."

"Just a dozen?" Bud asked. "I thought you were going to need at least twenty. What gives?"

"Well, you remember that lower layer in the atmosphere we found with the low winds? It turns out that we will be able to cover a larger area than we initially believed to be necessary, and with about a ten percent reduction in the number of OzoNuts. They will be able to cover a greater area individually in the same amount of time because they won't have to fight headwinds for a great portion of their flying day."

Bud agreed that this was excellent news.

"Tom," Harlan Ames said walking into the inventor's office without knocking an hour later. "Great news!"

"What is it, Harlan?" Tom asked.

"You will love this. Senator Grimsby's office was raided by the FBI and CIA this afternoon, and guess what they found?"

"Our leak?" inquired Tom, getting excited.

"Absolutely!" replied Ames. "The senator's personal secretary was supplying information—and not just about *our* work—to a network of industrial spies. Turns out that one of those spies was wanted by the CIA as a probable terrorist sympathizer. Born in Baghdad, raised in Qatar and Afghanistan, and evidently was indoctrinated by one of the terrorist organizations as a teen. He came to the U.S. before his 18th birthday, so security checks were minimal."

"You said 'was'. Does that mean they have him?" asked Tom.

"They do. And the secretary and at least three more of the estimated eight people she was giving the info to."

"Has she said anything?"

"She blames the senator for treating her like a wage slave and for demeaning her in front of her family once. Held a pretty good grudge for more than three years and saw a way she thought would punish the senator. When the CIA informed her of the terrorist angle, she broke down and confessed to everything."

Tom let out a deep sigh. "Harlan, I am so glad to know that the problem wasn't with Swift Enterprises. You can't image."

"Trust me, Tom. I can. There's one other thing. Rumor has it that the senator is not only so embarrassed by this that he is not just writing his resignation letter, but he is also writing a letter to your

father apologizing for everything he has done in the past that may have been anti-Swift or detrimental to our Government work.”

“You’ve made my day, Harlan.”

“Once again, that’s not all,” the Security man said with a grin. “You remember the homing beacon on the *Sky Queen*?” Tom nodded. “Well, it got planted sometime during your trip down to the Antarctic with all those scientists. And, we know who did it!”

“Who?”

“It’s that little pipsqueak, Biebel. It turns out that he has held a grudge against Swift Enterprises going back more than seven years. He was turned down for a position here because of his lack of U.S. citizenship. Evidently hated us ever since, so he took this opportunity to place the device on board.”

“But, how did you find out?” Tom asked.

“He must have used gloves when he built the thing, but he forgot to use them when he mounted it in the *Queen*. We got fairly clean prints of every one of his little fingers!”

“What did he hope to accomplish? And, does this mean he is in league with the terrorists?”

“The CIA discovered that he had contacted a suspected terrorist leader the very day you all returned. He’s had some pretty bad financial problems lately. It was probably for money as well as revenge. The call was made from a disposable cell phone that he discarded near the store he bought it. A clerk at the store remembered him.”

“I’m glad that angle is closed. Have we ever found out anything about those mystery jets? The ones that attacked us?”

“They remain a complete mystery. The Air Force claims that they shot down three of the six over the Antarctic, but the other three blew up on their own just out over the open water. They figure that the jets had some sort of self-destruct mechanism. Nothing recovered from those, but one body was found in the wreckage of one of the jets they shot down. Too burned to immediate identification, but a forensic coroner says the pilot was a man of Middle Eastern or Arabic decent. Also that he was suffering from probable terminal cancer.”

“A pilot with nothing to lose? So our attackers are either all dead, or we haven’t even heard the end of all this?”

“Sorry, Tom. Wish I had better news on that front.”

“At least we’re getting the OzoNuts launched without any interference,” Tom said.

“Let’s see,” Ames muttered. “What was the other thing? Oh, yes! Amy Deardorff has come around. She is so frightened. She remembers the day she worked on the jet you were flying. She couldn’t find the proper bolt so she installed one that seemed to fit. She has offered to quit or to go to jail or whatever you want to do with her.”

“Let her know that she will be responsible for checking out every jet in that series to make sure she didn’t do the same thing to another aircraft. After that, she can take a transfer to another department if she wants to keep working at Enterprises.

“Got it. Oh, and George Dilling had a radio message for you from President Latumba. You’ll want to hear that one.”

He filled the youth in on several other bits of information and then departed.

Tom looked at Bud and raised an eyebrow. “Is it too early to say this is turning out to be our lucky day?”

“I wouldn’t jinx it, Tom. Let’s give George a call.”

They contacted the communications chief and asked that he read out the African president’s message.

“Hold onto your hat, Tom. Here goes:

Dear Good Good Friend, Tom Swift,

I must tell you of the most exciting news. Your work team has completed building roadways between the capital and three of our most desperate villages. They have each had two of your water machines installed. My people, who were so close to death, have begun to flourish. Soon a road will be able to unite our nation with our new Wahlota territories.

By the time you return, which I hope to be soon, you will find a fine, new airstrip here. Your road paving machine is a marvel.

I have been assured that the other village roads will be completed in less than eight more days. It is truly a miracle.

When I approached you and your father that day in Germany I was a desperate man. Today I am a happy man. I can once again hold my head high when I walk

down the street or into one of our villages. I have already been visited by delegates from our new territories and we are in complete agreement as to how to proceed. They have a helicopter. I will enjoy having access to it. Better still, they have fuel for it.

They bring us a new source of wealth; they have a very productive zirconium field that will mean a source of income for many, many years.

There are now two pieces of business I must mention. Firstly, the green minerals you found to be so helpful. I hereby grant you exclusive rights to them for as long as you desire. All we ask is that we be provided enough for our own fabric use. About twelve kilograms per year I think.

The next piece of business isn't really business. It is a request from one of the women in Margat's village. She gave birth to a baby yesterday. She has asked for permission to name it 'Thomas' because it is a boy. Would you approve of her request?

With gratitude and love from my people and myself, I remain,

Samuel Latumba, President

"That's it, Tom," the communications man said. "Any return message?"

Tom dictated a heartfelt message thanking the president and also the village woman for her honoring Tom with the naming of her baby. He mentioned that the green mineral rights would be discussed at a later date. "That should do it for now, George. Thanks!"

Less than twenty minutes later Tom received a call from Hank Sterling.

"Tom," he began. "I just got word that the outer shell of the *Super Queen* has officially been completed and is ready for your seal of approval."

"Gosh, Hank, that's wonderful news. I thought we were weeks behind because of the solar panel sabotage."

"It turns out that Pederson's felt so guilty they worked double shifts to get us the replacements for the first batch as well as accelerated delivery of all the rest of the order."

“Let the assembly team know that I’ll be over first thing in the morning to give her the once over. When will she be flight worthy?”

“They say within a month at most, Tom. After all it is only the shell right now. I told them to assume that you want first crack at her after they give her a warm-up and taxi run once she’s ready for that.”

Tom thanked his chief engineer and asked Hank to pass on his congratulations to everyone involved in the lightning-fast design and building of the aircraft.

“You know what’s next, don’t you, skipper?” Hank asked. “Now you have to design all the different modules that the *Super Queen* will carry. And, decide where they will take you.”

Tom sat back in his chair trying to think of what he might be doing next. He was sure that the new *Super Queen* would play a large part in it. Perhaps another expedition to Africa; maybe tackling the age-old dream of crossing under the Atlantic Ocean with a high-speed train tunnel; even the possibility of trying to raise one or more of the seven ‘lost’ nuclear submarines littering the depths of the Pacific, Arctic and Atlantic oceans.

A few moments later, Bud entered the office. “Hey, Prof. Harlan just passed me in the hall and gave me the good news. Everything’s peachy, right?”

“Right!” Tom replied with a grin. “But there’s just one thing I need to do now.”

Picking up the phone, Tom dialed a number. While waiting for it to be answered, the young inventor hummed a current hit tune.

Breaking off when he heard the voice on the receiver at the other, he said, “Bash? It’s Tom. I’ve been thinking, and I want you to know that I really like you. *Really*. Am I crazy, or could we be something? Together, I mean. Like really boyfriend and girlfriend?”

He couldn’t hear it, but the beautiful, dark-haired girl at the other end suddenly had a smile on her face, so huge that threatened to split it in half.

She punched a fist into the air and mouthed the word, “YES!”

