

TOM SWIFT #34B: TOM SWIFT AND HIS TRANSPHOTONIC
CROSSOVER

CHAPTER 1: RETURN OF A DEADLY ENEMY

"Tom! Are you sure you should be launching this so close to the *Express*?"

Tom Swift Jr. grinned at the worried look on his friend Bud Barclay's face.

"Relax, Bud. I have the superrepletrons attuned to metal of the TC probe. If we get an explosion this time, the debris will be easily repelled."

Bud wiped his forehead. "Even so, I'm still worried after that weird implosion at The Citadel."

Tom nodded. "That was close, all right. But I'm quite confident that I corrected the problem." He gazed out the window of the *Cosmotron Express I*. "Just think, Bud. If this works, for the first time, mankind will have a chance at going to the stars! I might actually have a chance to visit the Pleiades!"

Bud grinned. "Yeah, I remember your explanation to your mother about the seven stars on the *Star Spear*! And how you hoped to visit them one day."

"Well, Bud, that day may be even closer than I realized. Anyway, the Super Crab has it in position now, so let's see what happens!"

Tom had taken his immense spaceship, the *Cosmotron Express I*, out beyond the orbit of Mars. Here, he hoped his latest experiment, a small unmanned missile equipped with the transphotonic crossover engine, would be the first human device to go faster than the speed of light.

Tom thought back about six months ago, when he first thought of the idea. He had been experimenting with the engine from a spacecraft found on the bottom of the Atlantic Ocean, not far from Aurum City. The skywheel-shaped spaceship had belonged to his space friends, and was believed to be part of an armada that had crashed in the Central American jungles several thousand years ago. Only this one had ended up in the Atlantic. There might have been others on the bottom of the ocean. If so, they had not been found.

After the affair with the Galaxy Ghosts, his space friends had contacted him again, asking him to raise the spaceship and, if possible, to repair it. His space friends desperately wanted it back, plus any information its computer banks may contain. So far, for reasons unknown, his space friends had been unable to penetrate the earth's atmosphere. Tom was beginning to believe, now, that it had more to do with the earth's magnetic fields than just the atmosphere alone. But why would that have any effect on them, he often wondered. And what about all the data Exman had gathered for them years back? Why had they not acted on it?

Tom had proceeded with the excavation of the ship, keeping it as close to a secret as he could. Even so, the Brungarians had somehow

caught wind of the job, and had attacked him during the towing of the vehicle. They had used an improved version of their artificial vortex, which they had once used to try and steal an ice-encased mastodon with. But Tom had been expecting something like this and counterattacked with a special coarse strand of Durastress, his wonder plastic. The strand had been sucked into the artificial vortex's intake, wrapping itself around the blades and jamming the engines. Before the Brungarians had a chance to free it, it exploded, taking out most of the engine room with it. In the end, Tom had to rescue the Brungarians, to their embarrassment. They weren't exactly grateful.

Over the past ten years, repairs on the spaceship had been slow. So much of the alien technology Tom, despite his brilliance, simply didn't understand. He tried to access the ship's computer, but the databanks used a gas-magnetic memory system, similar to the cache he and Bud had recovered from beneath the ocean floor years ago using his Subocean Geotron. He was able to reactivate the computer, but was unable to understand how to make it retrieve the necessary data. At least he was able to tell his space friends that the computer was working and the data banks were still intact.

Then, six months ago, while trying to understand the antigravity engines (and speculating on whether they worked like his G-Force Inverter), he made an unexpected breakthrough - but not on the antigravity engines. Instead, he discovered what he believed to be the principle behind the ship's faster-than-light engines. For months he worked long hours, living and breathing nothing else. Even his fiancé, Phyllis Newton, normally very sympathetic when he got lost in a new project, began to complain about their lack of dates. But by then, he had enough of the design stage behind him, and could afford to take a few breaks. Even so, when they were dancing or eating, a part of his brain continued to work out new equations and refinements to the prototype. Finally, it was turned over to Hank Sterling, his chief model maker, and the Swift Construction Company for the engine to be built.

Two months ago, at The Citadel, the Swift's private atomic reactor, he tested the first prototype engine. The results had been devastating. The test lab, which had been located a quarter mile off the main grounds, and fifteen feet underground, had been vaporized. No explosion or concussion wave. Instead, there'd been a huge *POP!* of imploding air. When Tom and the others arrived, they found a crater half-filled with sucked-in sand. The crater was an eighth of a mile in diameter, and exactly fifteen feet deep. No one was hurt, of course. Tom had handled the activation of the engine by remote control, using one of his new-model giant robots. A few weeks of tinkering with the schematic had revealed to him a possible flaw. He quickly had the engine rebuilt, and placed into a missile. And now, here he was, outside the orbit of Mars, ready to give it another test.

Tom pulled a lever, opening the cargo-bay doors. Inside, on an electromagnetic rail, the missile lay, pointing outwards. Tom pushed a button, activating the rail. The missile floated upwards about an inch. Punching another button caused the magnetic field to become stronger towards the rear of the missile, and weaker towards the tip. The resulting imbalance caused the missile to gently move forward until it cleared by bay doors. The missile was moving about five

miles per hour.

Once clear of the *Cosmotron Express*, Tom activated the repelatron engines. Over the years he had improved the repelatrons to the point where a single repelatron would repel all matter, not just a single element as the originals did. They were a true anti-gravity device. The days of chemical propulsion was fading into the distant past.

The missile picked up speed. Within minutes it was a distant speck of light, visible only on the radar screen. When it was a minimum of ten miles from the *Express*, Tom turned to Bud and nodded. "Okay, chum, here we go!" Bud nodded back, and held up both hands, fingers crossed.

With a wry grin, Tom activated the transphotonic crossover engine. A green light came on. Then he punched a button. Both men stared at the radar screen. It was pointless trying to locate the missile out in space - it was simply too far away. But on the radar screen...

"Bud!" Tom gasped.

"I see it, Skipper," Bud replied, "or rather, I don't!"

For the green blip denoting the missile had vanished the moment Tom pressed the button.

"Tom, do you think...?" Bud began to ask.

Tom shook his head in wonder. "Seems likely, flyboy! I mean, what else could have happened to it? It must have gone transphotonic - faster than light! Well, we'll know more when it gets back."

"How long before it does?" Bud asked.

"Should be another fifteen minutes. I programmed it to go transphotonic for about five minutes, revert to normal space, take readings, then retrace its route."

"How far do you think it will go in five minutes?"

Tom frowned. "That, Bud, is one thing I'm not really certain about. I programmed the engine to run fairly flat on the asymptotic curve, which should push its speed up pretty high. It may go outside the orbit of Pluto."

Bud flashed a sheepish grin. "I'm afraid I really get lost when you talk about the math behind the TC engine!"

Tom laughed. "Don't worry about it, pal! Just keep in mind that this is only the first of many such test flights. Before I can even begin to build a full-scale model for people to ride in, I've got to calibrate the speed and distance the engine will be able to produce."

Just then a beeping noise came from the radar screen.

"There it is, Bud!" Tom exclaimed. "But look - it's way off course!"

Bud nodded. "It looks to be a good four or five hundred miles away. What's it doing way over there, Skipper?"

Tom shook his head. "Beats me. It was supposed to return to within a half-mile of the *Express*."

"Well, we might as well go get it and find out what happened."

"Yes, indeed." Tom was already setting the *Cosmotron Express* in motion. "This is what I mean, Bud. Something must have happened to it in the ultra-light region. Or, maybe, during the transition from ultra-light to sub-light. There's going to be plenty of other test flights before I can work out the kinks in the process."

The *Cosmotron Express* I began to close in on the transphotonic missile. Tom opened the bay doors to launch the Super Crab. The

Super Crab used its claws to gently grab onto the missile.

As the Crab began to make its way back to the *Express*, the infrared scope suddenly lit up and began beeping.

"Tom! Look!" Bud exclaimed, pointing at the screen.

The screen showed two heat sources closing in on the Super Crab and its prize. Alarmed, Tom looked at the radar screen. But it showed nothing, other than the Super Crab. Both men stared out the window, but could see nothing - for a few moments, anyway. Then, just barely visible against the blackness of space, Tom could make out two cylindrical shapes, somewhat larger than the transphotonic missile. The missiles arranged themselves between the Super Crab. Panels on either side of the missiles opened, and what looked like radar dishes emerged. Abruptly, the Super Crab came to a halt, not ten yards from the *Cosmotron Express's* cargo bay!

"Bud! The Super Crab's no longer responding!" Tom exclaimed, throwing switches and adjusting knobs.

Indeed, the missiles and the Super Crab turned around on their mutual axis, and headed back into space.

At once, Tom set the *Express* into motion once more. "Oh no you don't!" Tom said. "I don't know who you are or why you're stealing my missile, but you're not going to get away!"

"Atta boy, Tom!" Bud said, thumping the panel with a curled-up fist. "Let's go get 'em!"

The missiles receded quickly, but the *Express* was able to keep pace with ease. All at once, a new blip appeared on the infrared monitor. A large one. But the radar screen remained silent.

"Tom - ?" Bud began to ask.

Tom nodded. "Yes, I see it Bud. A huge ship. With radar-jamming capabilities."

Bud nodded in turn. "Guess that explains how it got past our Outpost in Space, as well as the new Astro-Dynamics space station."

Tom shot his friend a glance. "There's also the possibility it was assembled in space. Well, we'll know soon enough."

Tom brought the *Express* to a halt. The unknown ship came into view. Like the missiles themselves, the ship was coated with a dull black paint that made it virtually invisible against the blackness of space. Then a large cargo section opened. Inside could be seen various types of cranes and forklifts. People in odd spacesuits, their visors opaqued against the sunlight - and to cover their identity - moved about with a stiffness that suggested the cargo bay had no artificial gravity, and the suits used magnetic clamps on the soles to keep the people anchored.

To Tom's surprise, the missiles also came to a halt, just outside the cargo bay. Then the telecommunications monitor began to beep.

Tom and Bud exchanged glances. "Looks like we may find out who is behind all of this," Bud commented.

Tom nodded, looking apprehensive. "But why? If it's the Brungarians or the Kranjovians, why go on record like this?"

"Only one way we're going to find out," Bud said.

Tom nodded, then pressed a button. This activated the videotape unit, so Tom could keep a record of the conversation. Then he activated the telecommunications monitor.

The screen lit up, revealing a familiar face. Lynx-like eyes of emerald green stared at the famous inventor. The head was almost

completely bald, except for a que of jet-black hair trailing to the back. It had been over ten years since Tom had seen this face, but he knew it in an instant.

"Black Cobra!" Tom and Bud cried out simultaneously.

Tom had first tangled with the power-mad scientist in the mountains of Argentina, when he had projected a force field of anti-matter around Nestria, his space friend's planetoid. The next time had been during the affair of the strange brain-comet the Green Orb from outer space, though Tom had not met with the Black Cobra a second time. The Black Cobra had supposedly been killed when his midget sub had been sunk.

"I thought you were dead!" Tom added, incredulous.

The Black Cobra laughed. "Well, you know what your own Mark Twain once said about rumors of his death having been exaggerated!" He laughed again, enjoying their amazement and dismay. "It was so easy to fake my death. Just as I had the first time, when you thought me to be destroyed by my own anti-matter field. Unfortunately for you, I had not been on the ship, but merely relaying my image from another location on Nestria. Likewise, I wasn't on the sub when it sank. It was another relayed image. That, plus a planted skeleton which had the same size and shape as my own. As I said, an easy trick."

Tom grimaced. *I should have realized, he thought, that Black Cobra could use the same ruse twice! But where's he been all these years? There's no point in asking what it is he wants from me - he already has that in front of him. But Black Cobra weaves a lot of webs. What else is he up to?*

Out of view of the telecommunications camera, Tom's hand crept near two other buttons on the control board. *Thank heavens, he thought, I had the foresight to rig these up!*

"All right. So I now know you're still alive. Why tell me this? You know I'll alert the authorities about this."

Black Cobra laughed again. "Oh, come Tom Swift! You are hardly so naive as to think I'm going to let you go unharmed. No, my dramatic pause here is simply my way of rubbing your nose in the fact that I have stolen your latest invention - and that there is nothing you can do about it! I will soon discover how it works; it may come in handy later on. For now, simply know that my plans for domination of the Earth are well underway. I have further plans as well: the eventual domination of various star systems, possibly the ones your space friends inhabit. Maybe you think this is megalomania on my part. Let me assure you it isn't. I wouldn't make such a boast unless I could back it up fully." Tom and Bud exchanged worried looks. "And now a not very fond farewell, Tom Swift. You have been a thorn in my side for far too long!"

The missiles glided gently into the ship's cargo bay. The hatch slid shut. From another hatch a strange gun barrel emerged. A computer screen lit up: the gun was firing a stream of anti-matter!

CHAPTER TWO: VISITORS FROM SPACE

As the two missiles approached the enemy ship's cargo bay, Tom quickly pressed the two buttons his fingers had been touching.

Two things happened at once: first, out of the Black Cobra's sight, a small hatch in the TC missile opened, and an even smaller black box was ejected. Second, inside the TC missile, a command was issued to the transphotonic engine...

Inside the *Cosmotron Express*, Tom grinned, imagining the look on the Black Cobra's face as his anti-matter cannon failed to have any effect on Tom's ship!

Bud looked at his friend, puzzled. "Skipper, what's going on? Why hasn't the Black Cobra started firing at us?"

Still grinning, Tom pointed at one of the monitors. "Oh, he is, Bud. He's firing a beam of pure anti-matter at us."

"You mean, like the field he once had around Nestria?" Tom nodded. "But - but why hasn't it destroyed us?" asked Bud, aghast.

"Because I took precautions against it," Tom answered blithely.

"Precautions? But how - ?"

"How did I know he'd fire an anti-matter beam at us?" Tom finished the question for his friend. Something beeped on the control panel and Tom pressed a button, closing the cargo bay doors. "Good! I've got it. Time to go, Bud. Strap yourself in the chair. We're going to be moving pretty fast."

Tom did likewise. Pressing switches, he flipped the *Cosmotron Express* around on its vertical axis; then, gripping the throttle, fed power to the superrepeltrons, increasing the speed to maximum.

As the *Cosmotron Express* began to speed away, the telecommunications device beeped once more. With a fairly good idea of what to expect, Tom pressed the button. The screen lit up, revealing the Black Cobra's rage-contorted face.

"SWIFT!! *What have you done?*"

Tom shrugged. "Well, you're the one who wanted my transphotonic engine. It's all yours. Good luck with it!" Tom cut the connection.

Once again Bud shot his friend a puzzled look. "Tom? Would you mind telling me what's - uh-oh!" He pointed at the infra-red and radar screens. This time, both were lit up. "Looks like he's given up on the anti-matter beam, and is firing missiles at us."

Tom shrugged once more. "For all the good that will do!"

Tom was correct. As soon as the missiles came within range of the *Express's* superrepelatron field, they veered off in various directions.

It wasn't long before the Black Cobra's ship was far in the distance. Already they were within Mar's orbit, and headed straight back for Earth. Tom began to slow the ship down.

"Okay, Skipper, give," Bud said in a mock-menacing tone. "How did you know to build a defense against the Black Cobra's anti-matter

beam, when none of us even knew he was still alive? And why aren't you worried about him having your transphotonic engine?"

Tom chuckled as he punched in the coordinates for his Outpost in Space into the Mark IV Spacelane Brain. "Call it a case of the 'willies', Bud. Not long after our encounter with Dr. Stang, I wondered if someone else might just run across the plans for the Black Cobra's anti-matter generator. Or come up with one of their own. This was just prior to our adventure with the Galaxy Ghosts, by the way. Anyhow, I wondered if I might come up with a better way of handling a force field like that. At the time, I really wasn't thinking of a defense against anti-matter being used as a weapon. Instead, I wanted something better than the 'hood ornament', as you called it, that we placed on the *Challenger*. In the end I was inspired by the wrap-around sonar shield I'd invented some months ago." Tom was referring to the adventure when they were trying to beat the Brungarians to recover a probe from Jupiter, buried in the ocean depths. "This time," he continued, "I made highly miniaturized versions of the electromagnetic generator, and placed them in strategic locations around both *Cosmotron Expresses*, and even the *Challenger*. I have to admit that when I was finished with them I felt a bit foolish, like I was jumping at shadows. It sure seemed that way - up until just now, I never had any particular use for them. I'd been halfway thinking of having them removed."

"Well, I'm very glad you never carried that thought out!" Bud exclaimed with a laugh.

"Same here, pal!" Tom agreed. "And I'm just as glad they worked the first time. I wasn't too certain if the repelatron field would interfere with them, but the two fields appear to be transparent to each other."

Bud nodded. "Okay, but how about the rest? What was Black Cobra so mad about?"

"Oh, that," Tom said with studied nonchalance. "For one, I was able to recover the transphotonic missile's data core."

"How?" Bud asked, amazed.

"I built in an eject system. Remember how Simon Wayne stole our mechanical 'pigeon' drone? And how Raymond Turnbull once stole our relotrol?" Bud nodded. "Well, I got a little tired of that always happening. So I took precautions this time. And in addition to the data core ejector, I also rigged the transphotonic engine to self-destruct in case it was seized by a hostile force. I had a very small anti-proton bomb tucked away inside the engine. The material came from the Caves of Nuclear Fire in Africa. Don't worry, it was perfectly stable. But once activated, tiny packages of acid dissolved the Inertite keeping the ore stable, and released a small amount of water. Result: just enough anti-proton radiation to virtually disintegrate the engine. There should be nothing left of it."

Bud nodded, remembering how the anti-proton gas from the caves dissolved almost everything he and Tom had thrown against it.

"Won't the Black Cobra's man be affected by the radiation?" he asked.

Tom shook his head. "Probably not, if they're careful. The radioactivity has only a half-life of fifteen minutes. If they wait an hour or two, it will have dropped to completely safe levels."

By now, the Outpost was coming into view. As the *Cosmotron*

Express began to approach the space station, the radar screen lit up once more.

"Now what?" Bud asked with annoyance. It quickly changed to a grin as the familiar outlines of a Swift space ship grew in size through the window. "Hey, isn't that the ship with Curly, Vic and the others?"

Tom nodded, smiling. "Sure is, Bud! I was hoping we'd be here when they finally returned."

Ten years ago, Curly Morgan, Vic Lane, and other solarnauts had been placed on *Bartonia*, a hollow asteroid far out in the asteroid belt. There they would remain for almost three years, performing deep space studies and relaying the information back to Earth. They had come back home after their time was up, then went back out once again when the other crew had come back. This time they stayed almost an extra half-year in order to help with one of the many science projects underway. Almost reluctantly, they'd returned home when the new crew finally arrived.

The telecommunications screen beeped. Tom pressed the button with joy. "Hey guys, long time no see!"

"Hey Tom! Hi Bud!" they were greeted. "Good to see you again. You guys have really grown!"

"A few extra heads, maybe!" Bud jibed in return.

"And I can't get over the changes you've made to the Outpost!" Curly exclaimed. "I mean, I know you've sent us pictures of it, but to see it up close like this is something else!"

Tom's Outpost in Space had started out as a hub with the main bodies from twelve rocket ships attached. It remained that way for a good six years. But Tom could still remember having trouble docking the *Challenger* to the hub. So, with wealth pouring in from various inventions: the solar batteries, the atomic cell, and the G-Force Inverter, he began making modifications. First, a long tube was inserted in what could be considered the "base" of the space station. A second hub was attached, then another tube extended from the base of that. Finally, a third hub was attached to that end as well. This allowed for many additional labs and offices to be attached to the three hubs. Plus, two dedicated docking stations, one for normal rocket ships, and the other for unorthodox ships like the *Challenger* and *Cosmotron Expresses*, were built. The first docking station, just below the original Outpost hub, was for the unorthodox ships. On the other side of the central hub was the other docking station. Curly's ship docked there, while the *Cosmotron Express* used the former.

Inside, backslaps and handshakes were exchanged. The two crews made their way to the slow-moving spin decoupler. The central hub spun on its axis, allowing for a 1-G environment. Because of that, the mess hall, dorms, and various recreation facilities were located there. The rest of the Outpost remained stationary.

"C'mon, guys," Tom said to the returning astronauts. "Before we take you back to Earth, I'll treat you to a free meal in the cafeteria!"

"You're on, Skipper!" Vic Lane replied. Like most of the crew from the asteroid, he was now a grizzled veteran of space life.

They grabbed hold of a conveyer cord, and allowed themselves to be pulled "down" into one of the converted cargo bays. Their weight slowly increased as the conveyer system approached the outer - or, in

this case, lower - section of the cargo bay. The cafeteria, one of several, had several small tables and chairs sitting on the transparent "floor". Nearby, a self-serve automat, using many substances created by Tom's Space Solartron, was able to provide many kinds of surprisingly tasty food.

"Man, I never get tired of the view from here!" Bud exclaimed, looking down through the floor, which was made of transparent Tomasite plastic. The entire universe seemed to be slowly passing by with each turn. Curly, Vic and the others were over at the automat, punching in orders for their food.

When they sat down at the table and began to eat, Tom suddenly jumped up. "Excuse me, guys. I'd better let my father know what happened out there. I'll be back in a few minutes."

Vic looked up. "What did happen, Skipper?"

Tom looked at Bud. "Bud will fill you in. Be right back."

As Bud began to describe their first experiment with the transphotonic torpedo, Tom took the upward-going conveyer. He made his way through the hub to the opposite spin decoupler. An elevator took him "up" to the original Outpost hub. Tom quickly made his way to the communications room.

"Hey, Tom," Ken Horton, their communications engineer, greeted Tom. Ken had been the Outpost's chief in charge of communications since the day it had first been placed in orbit.

"Ken, I need to get in contact with Dad."

Ken nodded. "I'll get right on it, Skipper."

Ken activated the Private Ear. The Private Ear utilized an anti-inverse-square-law technique that prevented radio waves from spreading out. Hence, any two-way conversation was kept on a tight beam, and would break if there was any attempt to listen in.

Down below, in the Swift's private office, the eye in a portrait of Tom began to wink. Tom Swift Sr. recognized the signal, and pressed a button. The winking stopped, and Tom's voice came over a concealed speaker. If it had been a video transmission, the entire portrait would have vanished, allowing the televised picture to appear.

"Hello, Tom!" his father greeted him. "How was the first test?"

"Well, Dad, on that score, I have both good and bad news."

"Tell me," his father said.

Tom quickly filled his father in on the apparent success of the transphotonic missile, and the attempted seizure by the Black Cobra. Tom Sr.'s face went gray with shock. "The Black Cobra! Here we thought he'd been killed years ago, after the affair with the sentient meteor!"

"Yes, but he merely faked his death again. It's hard to say what he's been doing in the meantime. Recouping his losses, no doubt. I wonder where he launched his space ship from? His old South American base?"

"I doubt it," his father replied. "He's not likely to have gone there. Government forces closed it down years ago. No, he must have a new base somewhere. We'll have to find it and close it down as well."

"Agreed. Well, tell Mother and Sandy that I'll be down pretty soon with Vic and the others. I'm eager to start digging into the data box!"

"I understand," his father said, then added wryly, "but you might want to hold off investigating it long enough to at least say hello to your intended!"

As Tom face reddened, and the communications crew laughed good-naturedly, he replied, "Of course, Dad! I hadn't meant to forget Phyllis! Be sure to give her my love, and tell her I won't be very long. Let's see, how about if I take her out to the Shopton Yacht Club? And no UFOs to spoil things this time!" he added with a laugh, thinking of the long-ago adventure one Fourth of July, just prior to the arrival of the Mystery Comet.

"I think we can go that one better: how about dinner right here at our house? Mary plans to grill some steaks and hamburgers, and toss a salad. You can invite the whole crew to come along as well."

But Tom caught the undercurrent of concern in his father's voice. "You think it might be safer to stay at home?"

Tom Senior let out a small sigh. "Tom, I know you can defend yourself quite well. But you're going to be up against a ruthless enemy. Further, he's revealed himself now. He won't have any further reason for keeping the 'kid gloves' on any more."

Tom grimaced, then nodded. "Yes, Dad, you're right. I've got to think of Phyllis' safety as well." He grinned. "Tell Mom she's going to have at least ten extra guests for dinner!"

Tom Senior smiled. "That's fine. You know your mother: she's always happy to have an excuse to throw a party!"

Tom said good-bye to his father, and soon returned to the cafeteria. The others were about finished eating. Not wanting to delay their return to earth, Tom fixed himself a quick ham sandwich and had a bag of chips to go with it.

"Tom!" Bud cried out. "Did you reach your father okay?"

Tom nodded, tearing into his sandwich. "Just fine, Bud. He told me that Mom was going to have a cookout for us, and then suggested that we all eat at home tonight. Sound okay with you?"

Bud stared at his friend for a moment, then nodded. "Sounds great!" Privately, though, he sensed another reason for Mr. Swift's invitation.

Curly and the others, however, took the invitation at face value. "A chance to taste your mother's cooking? Try to keep us away!" Vic joked. The others laughed and nodded.

After Tom finished eating, he led the way "up" to the landing bay for the *Cosmotron Express*. The *Express* was parked facing outward, an air tube of transparent Tomasite connecting it to the rear to the station. The astronauts made their way inside the *Express* one at a time.

At the control console, Tom pressed a button, causing the air tube to disengage and retract. Another button released the magnetic clamps. The *Cosmotron Express* floated freely. Turning a knob, Tom engaged the superrepeltrons. The knob was a vernier control: allowing for small - rather than large - scale adjustments. The *Express* moved away from the Outpost at barely ten miles per hour.

Once they were clear of the Outpost, Tom brought the superrepeltrons up to full power. He adjusted the orbit for reentry. As the *Express* began enter the earth's atmosphere, Tom glanced up into space once more. By now the *Express* was on the opposite side of the planet. High above them was a startling sight.

"Is that it, Tom?" Vic said, looking up as well.

Tom nodded. "That's it all right, Vic." He gave Vic a wry smile. "It's going to make our own outpost look rather primitive, huh?"

Vic nodded. Both men stared up at the huge, spherical object floating high above them, Astro-Dynamics' latest project: their own space station.

Rather than go with a skywheel design, the engineers at Astro-Dynamics came up with a unique approach: a large geodesic sphere, about a quarter-mile in diameter. It would be spun to give a continuous 1-G gravity. Both ends along the axis of spin were open, allowing space ships to dock and take off without having to turn around. The outside of the sphere was completely covered with Astro-Dynamics's proprietary Solex solar power converters. Tom had examined one of the tiny Solex panels and had come away very impressed. Each Solex panel had a seventy-five percent conversion rate - far in excess of any other type of solar panel. The panels were cheap to manufacture and very rugged. They vied with Tom's own solar batteries for the share of the low-power market.

Tom could make out the space station - named *Star Bright*, though most astronauts jokingly referred to it as "The Golf Ball" - and even see some of the interior support struts. Parts of the space station were still under construction, and the exposed gaps could in the station's skin clearly be seen.

"Well, Skipper," Bud said as he came up to them, "looks like you're going to have to build another Outpost in Space!"

Tom laughed. "Hey, pal, one step at time! Let me get the transphotonic engine perfected first!" Then, in a more somber tone, he informed Bud and the other astronauts: "The fact is, guys, that Dad and I have talked about building an Outpost II."

Curly laughed. "I knew it! I knew you guys wouldn't let Astro-Dynamics' oversized ping pong ball dominate the night skies for long! What is the next Outpost going to look like?"

Tom held up his hands, grinning. "Hold on, Curly! We haven't even so much as jotted down a sketch on the back of a napkin. We're just talking about it."

"Are you going to build a sphere as well?" Bud asked, knowing full well that his friend's head was probably jammed full of design ideas.

"No, I'd hardly steal Astro-Dynamics' idea." Tom rubbed his chin thoughtfully. "No, I've got another idea in mine. Some much more unique. And more, well, 'flashy', for lack of a better term."

"Okay, Skipper, give!" Bud demanded.

"Yeah, don't keep us in suspense!" Curly added.

Tom flashed them a grin. "Well, I was thinking of a - " Just then a buzzer went off. "Okay people, strap yourselves in. We're on the final approach to Fearing Island."

Fearing Island was a small, thumb-shaped island in the Atlantic where Swift Enterprises kept its rocket-launching facilities. Overhead, it was protected by four drone planes kept on constant patrol. The drones received a special encrypted signal from the *Cosmotron Express*, and allowed the ship to land. Any other type of space ship or plane would have been intercepted and forced to land, its controls overridden by the drone's automatic landing equipment.

Fearing Island hadn't changed much over the years. Space ships came and went on schedule. They now used repelatrions instead of rocket engines, so the liftoffs and landings were almost completely silent. Some of the buildings and sheds had been enlarged. One other item caught the asteroid crew's eyes: the hovering monorail terminal for the Monoswift. It was now used to shuttle Fearing Island's workers back and forth between the island terminal and the other terminal at Enterprises. The Monoswift used Tom's patented G-Force Inverter. The rail itself was filled with synthetic serpentine gas, a gas he had discovered on the moon, and held in place by a gravitational focusing lens originally designed for Tom's "space kite", the *Cosmic Sailer*. It hadn't worked very well for that purpose, but proved invaluable for keeping the monorail locked into place.

As it turned out, though, it wasn't the Monoswift that was used to return to Swift Enterprises. Instead, parked in its special landing field was the *Sky Queen II*, the successor to Tom's first major invention, the *Sky Queen*. The original was now located in a lead-lined area several thousand feet under the Moon's surface, the Tomasite lining for its old atomic power plant still leaking deadly radiation. The new model used both repelatrions and a G-Force Inverter for flight, as well as one of Tom's atomic capsules for power. This freed up considerable more space for storage, accommodations, and labs. Standing near the underhatch, looking cool in her colorful blouse and slacks, wearing a pair of wraparound sunglasses, was Sandy Swift.

Bud raced up to her immediately and they threw their arms around each other.

"Hey you two!" Tom called out with a laugh. "A little decorum, please!"

Sandy untangled herself from Bud, and ran over to her brother. She gave him a hug and a kiss on the cheek. "That's from Phyllis!" she said with a grin.

Tom gave his sister a hug in turn. "Where is she, by the way? I thought she'd fly over with you."

Sandy was an accomplished pilot, and had flown both *Sky Queens* many times. Tom trusted her implicitly with it.

"Oh, she's back at home, helping Mom fix things for tonight," his sister told him.

"And Dad?"

"Back at Enterprises. He wants to talk to you as soon as you get back."

By now the asteroid crew had boarded the *Sky Queen II*. "Then we might as well get going," Tom told her.

"Okay," Sandy replied. "You want to fly her back?"

"Need you ask?" Tom asked with a grin. Brother and sister climbed up the ladder and into the belly of the *Sky Queen II*.

Tom pressed a button, causing the ladder to retract and the hatch to close. Rather than use the ladder to reach the third floor of the *Queen*, he and Sandy shared a small elevator that ran between the three decks.

The original *Sky Queen* was a specially designed triple-decker aircraft. Almost as large as a Boeing 747, the *Queen* was coated with Tomasite plastic. Rather than jet fuel, it used a nuclear reactor to

generate plasma for thrust. The *Sky Queen* was a VTOL - Vertical Takeoff And Landing vessel. Originally it used the same type of plasma for the jet lifters. Some time afterwards, though, Tom had the jet lifters replaced with repelatrons. Repelatron lifters were now standard on both the *Queen II* and all Swift cargo jets.

Inside, the bottommost deck contained the storage, the atomic capsule and G-Force Inverter, and the unique air bay, which held two smaller craft: the hybrid cycloplane/jetmarine *Seagull* and the diamond-shaped *Gopher*, a smaller, more maneuverable version of his Subocean Geotron. The middle deck had numerous bunks, a galley, as well as the laboratory itself. The top deck was, of course, the flight deck. But it also held a large entertainment and conference room. This was wear Vic, Curly, and the others were at present.

They looked up in surprise when they heard a sharp *ding* and a concealed panel slid aside, revealing the small elevator.

"Hey, Skipper!" Vic cried out. "I didn't realize the new *Sky Queen* came with an elevator!"

Tom nodded. "We also have a larger one close by for moving cargo between decks."

He made his way forward to the cockpit. Sandy joined him in the copilot's chair.

Tom went through the preflight checklist. Getting clearance from the tower, he turned on power to the repelatrons. The *Sky Queen II* leaped into the air. The aircraft began to gain altitude. Then, without any warning, it came to a sudden halt.

In the lounge, Bud and the others were thrown to the floor.

"Bud?" Vic asked. "What happened? Were we supposed to stop like that?"

Scrambling to his feet, Bud replied, "I don't know, but I'm going to find out!"

Hurrying up to the cockpit, he started to shout, "Skipper, what's going - " and suddenly broke off. Bud didn't need to hear the radar screen beeping ominously. All he had to do was to look out the cockpit windshield to see the drone plane flying straight at them!

CHAPTER THREE: A WHOLE NEW WORLD

"Tom!" Bud shouted. "Move the *Queen*! We're going to collide!"

"I wish I could, Bud," Tom's calm voice bellied the stress he was under. "But it's locked in place. Something's jamming the controls. Radio's out as well."

"Is it the drone's override effect?" Sandy asked.

Tom shook his head. "No, Sandy, it should have no effect on the

Queen. Something else is affecting us."

"What are we going to do?" she asked, eyes wide with fear.

"Only one thing to do," said Tom as the drone plane grew near.

"What?" Bud asked.

Tom didn't reply. Waiting until the drone plane was almost upon them, Tom slammed the master power switch down. In the blink of an eye the *Sky Queen II* lost all power and began to plummet like a stone. The aircraft shook slightly from the wake of the drone plane as it shot by overhead. Quickly, Tom turned the power back on. Several seconds went by as the *Queen's* master computer restarted, bringing the electronic systems back up. Then the *Sky Queen II* slowed down, and began to go back up again. But, once again, the radar screen began to beep. The drone plane was returning.

This time, Tom didn't let the *Queen* regain its former altitude. Decreasing power to the repelatrions, he engaged the G-Force Inverter, and put the *Queen* into motion. The drone plane stayed right on the *Queen's* tail.

The radio was back on again, and filled with concerned calls from Fearing Island's control tower. "Skipper, what's going on up there?"

Tom replied back, "Can you regain control of the drone plane that's following us?"

"Negative, Skipper. We have no idea why it's gone rogue like that!"

"I figured as much," Tom said. "Okay, I'm going to try something risky." He activated the intercom. "Vic, you and the rest of the crew strap yourselves in. This is going to get hairy!" He didn't need to tell Bud. Bud had already strapped himself into the radio operator's chair.

At once, Tom put the *Sky Queen II* into a steep dive. The drone followed. The ocean grew closer.

"T-Tom?" Sandy cried out, her face chalk-white.

"Hang on, Sis!" Tom answered her. He waited until they were about fifty feet above the surface, then slowly pulled back on the joystick. By the time the *Queen* leveled off, it was hardly more than five feet about the ocean's surface. Further, as the plane came out of the curve, Tom began to pour on the power. A few moments later the *Sky Queen II* went supersonic.

The effect was immediate. The huge body of the *Sky Queen II* ripped water right off the surface, creating a large "rooster tail". Behind the *Queen*, the drone plane's jet engine began sucking in water instead of air. The drone began to falter.

Sandy let out a scream. "Tom!" she said, pointing straight ahead.

Tom nodded. "I know, Sandy. I'm counting on that." Dead ahead were the cliffs on the west side of Fearing Island.

At almost twice the speed of sound, the cliff face raced towards them with blinding speed. Then, at the very last minute, Tom slammed on the repelatrions. All of the passengers gasped as the G-force increased their weight by a factor of three. The *Sky Queen II* leaped into the sky like a rocket, missing the cliffs by mere feet. The drone plane didn't. It slammed head-on into the cliffs. Even though the *Sky Queen II* was now almost a thousand feet into the air, it was still badly shaken by the shock wave that followed. At once, Tom reduced power to the repelatrions, and throttled back. Soon he brought

the *Queen* to a complete stop in mid-air, still below the original altitude where it had come to a halt.

For a moment, everyone in the cockpit just sat back, regaining their breaths, and trying to get their stomachs back under control. Then Tom switched on the intercom. "Everyone okay back there?"

A few minutes passed before they heard Vic answer: "Uh, yeah, Skipper, we're fine. T-that was quite a roller coaster ride you took us on!"

Tom replied with a wry grin: "Never let it be said we don't know how to give you an interesting welcome back home!"

"Don't worry," he heard Curly reply, "we won't!"

Switching off the intercom he turned to the others. "Sis? Bud? You two okay?"

Both nodded. "Great flying, Tom!" Bud said. Then he added, "Tom, that drone plane couldn't have created such a large explosion! It must have - "

"- contained explosives," Tom concluded for him. "And very powerful ones at that. Hold on." He switched on the radio. "*Queen* to Fearing Tower. You guys all right? Over."

"Fearing Tower to *Sky Queen*," came the reply. "Yes, Tom. But we're going to be sweeping up glass for several weeks! That blast must have knocked out every window on the island, including ours. As far as we can tell, though, there's been no other damage. We'll let you know. Are you going to continue to Enterprises?"

"Might as well," Tom answered. "I'll keep my eyes open for any other trouble."

"Right, Skipper. Fearing Tower out."

As Tom switched off the radio, Sandy asked, "Tom, what made the *Sky Queen* come to a halt like that? And why didn't it happen a second time?"

"For that matter," Bud threw in, "how did the drone stay locked onto the *Queen*? I thought the Tomasite plastic would shield it from any kind of electromagnetic target lock!"

Tom nodded. "You're right Bud. You too, Sandy. There's only one explanation: someone tampered with the *Queen's* computer systems. When the *Queen* reached a certain altitude, the computer caused it to come to a halt and stay there. I realized that at once. That was why I shut off the main power and allowed it to fall. Then I made sure I didn't rise to that same altitude again. Currently, we're several hundred feet below it. As for locking on to us: there must be a homing device planted in the *Queen* someplace. I'll conduct a search as soon as we get back."

"Tom, that must mean there's a spy at Enterprises," Bud said soberly. "I thought your new detection system would prevent something like that to happen."

Tom nodded, feeling frustrated. "So did I, Bud."

Spies and saboters infiltrating Swift Enterprises was nothing new. Before, Tom had tried to prevent this by requiring all visitors to wear a special wrist bracelet. The bracelet trapped radar impulses from various radar screens located around Enterprises, nullifying the radar's scan. Anyone not wearing the bracelet would stand out on the screen at once. But too many times his enemies had found ways around the system. Just recently, Tom had tried a new approach: instead of a bracelet, each worker and all visitors had their brain wave patterns

scanned and registered on the computer network. Like a fingerprint, this made it impossible for anyone to duplicate or counterfeit. Further, if a visitor turned out to be an enemy, the computer system could force that person's brain produce delta waves, inducing sleep. Likewise, anyone who tried to use drugs or knockout gas inside Swift Enterprises would be foiled: the computer could cause all of their brains to produce alpha waves, bringing them back awake. Now everyone was tracked. Yet once again someone, somehow, had eluded it.

"We may have a traitor," Tom muttered to himself. He felt a pang of sorrow at the thought of it. Who would want to betray his company?

A short time later, the *Sky Queen II* touched down on its special landing pad. Made of ceramic, the pad had been designed to absorb the heat from the original *Queen's* thrusters. Those days were long gone, and the repelatrions allowed the new *Queen* to touch down with feather gentleness.

Tom was already on the radio to Enterprise's security chief, Harlan Ames. "Harlan? This is Tom. I want you and your men to get up here and throw a cordon around the *Sky Queen*. Let absolutely no one except myself, Bud or Dad on board once we leave."

"I'm already ahead of you, Tom!" Ames answered. "My men and I will be there in a few minutes."

After he got Vic, Curly and the others settled in, Tom planned on searching the *Queen* from the observation dome down to the hangers. He had to find the homing device before the saboter had a chance to recover or destroy it.

As they emerged from the belly hatch of the *Sky Queen II*, Curly looked around in amazement. "Hey Tom!" he cried out. "Is it just me, or has Enterprises expanded?"

Tom laughed. "It's not just you, Curly! Yes, we'd added some more buildings and workshops since you guys took off. Come on, let me show you around!"

As Harlan Ames and his men took up their positions around the *Sky Queen II*, Tom and the others climbed on one of the jeeps nearby. The jeep was powered by one of Tom's small atomic engines and made no sound at all other than road noise as they drove around.

Tom pointed out to them the other terminal for the Monoswift. The new workshops where Hank Sterling, his trusted patternmaker, worked. And the new metallurgy shop where his son Brad, fresh out of college, now worked.

In the main building, the jeep road along the conveyer belt. Vic and Curly were treated to the sight of large laboratories: chemical, biological, and electronic. The labs were filled with scientists working on a wide array of projects. Soon they came to a halt near Tom's personal lab.

As the climbed out, Curly pointed to a nearby console with two computer monitors sitting side by side. There was a printer attached to each.

"Say, Tom," Curly said, "isn't that where your receiver for your space friend's messages used to be?"

Tom nodded. "Yes, it was."

"Where's the oscilloscope?" Vic asked, puzzled.

Tom and Bud exchanged glances. Tom gave the others a wry grin. "Well, that's one of the things I've made improvements to." He sat down in a nearby chair. "You see, a few years ago, Bud and I attended

a special computer conference out in California. It was sponsored by DEFENCE, the Pentagon's Defense Engineers' Future Enhanced New Computers and Electronics. Seems the military set it up some time ago to explore the future uses of computers. We were surprised by the many ideas presented. At least, I know I was.

"One of the most fascinating was the concept of linking various computers together so that valuable information could be shared between them - and not lost, should the world ever engage in a nuclear war. The first experiments linked several computers that had already been built. But it was very hard, due to the differences between the computers - even though they were built by the same company! So, it was decided that all of the computers on the new network - which has been given the name 'MacroNet', incidentally - has to be built according to the new standards. This costs a lot, but standardizing the computer's electronics and programs helps speed up the communications a great deal. So does using very high speed transparent Durastress optical cables - Dad helped to develop those - instead of ordinary phone lines, which they had at one time considered. The optical cables use very low powered lasers to transmit data. Needless to say, we're hooked into the MacroNet as well.

"Anyway," Tom said, waving his hand, "getting back to your question, Vic: we saw demonstrations of computers which used monitors like the ones you see here. Not punch cards or punched paper tape. Indeed, so advanced were some of these computers and their interfaces, that I felt acutely embarrassed about our receiver back here at Enterprises! I mean, here we were, using an oscilloscope and a punched-paper tape machine, like an old-fashioned ticker-tape machine! On our way back from the conference I began outlining a new model receiver."

Tom walked over to it. "You can see the results. First, I programmed the contents of our Space Dictionary into the computer. Now, if a message from our space friends comes in, the result is displayed immediately on the computer monitor to your right. It's also saved on the computer. Afterwards, we can get a direct printout. If there are words that the computer can't translate - and there still are, even after all of this time - they are displayed on the computer monitor to your left. Once again, it's stored on the computer, and we can get a printout later."

"Have you heard anything from them lately?" Vic asked.

Tom nodded. "Yes, indeed. They're quite excited by the idea of my transphotonic engine. As I suspected, their faster-than-light engines work the same way."

"How does your transphotonic engine work anyway, Tom?" Curly asked. "We've all been speculating on that while we were up on the asteroid."

But Tom shook his head. "Come around here in a day or two, and I'll tell you all you want to know. For right now, though, let's continue with the overview of the changes at Enterprises."

Tom led them into his main lab. There, Vic was surprised to see that the traditional drafting boards had been replaced with large, white, glowing translucent boards. Over each board hung what looked like a fountain pen. The boards were rimmed with buttons, and what appeared to be a plastic ball sunk into the boards' surface.

"Now these are what I refer to as 'electrodrafters', though Sandy likes to call them 'Magic Mirrors'! The boards are manufactured from transparent Durastress, and use a variation of my 3-D Telejector to project an image on the board. No more paper, at least not until the printout."

Tom walked over and switched one on. The others gathered around to watch. "See?" he commented as the image of a new project appeared. The lines seemed to glow as though they were filled with neon. Tom grabbed hold of the pen. "Now, when I use the pen and press this button, I can draw a line anywhere." Demonstrating, Tom drew a fairly straight line. "Watch this," he said, and pressed a button. Then he tapped the line with the pen. Instantly, the line became perfectly straight. He then drew a slightly lopsided circle. Once again he pressed a button and tapped the circle with his pen. The circle became perfect. "Or I can change it into whatever else I want: an ellipse, an oval, and so on. Or, if I erase part of the circle," he said and did so by marking to points of the circle, then punching another button, "I can then change what's left into anything else." More taps and more button-pressing turned the half-circle into a zig-zag, a sine wave, and back to a straight line. "I've added features that automatically determine dimensions and add dimension lines, as well as the legends and boiler plating for names, dates and revision numbers."

Vic shook his head. "Tom, this is amazing! You've relegated T-squares and erasing shields into the dustbin of history!"

Bud grinned. "You ain't seen nothin' yet, Vic!" He turned back to his friend. "Show Vic and the others the best part, Tom!"

Tom nodded. "Okay. You see, using the telejector's 3-D capabilities, I've been able to project these drawings into the third dimension. Like this." Tom pressed another button. At once, additional lines formed, creating a realistic perspective view.

Vic let out a whistle. "Man alive! It looks as though you could reach right into it!"

"Or," Tom added, "we can do this." With the press of another button, a surface skin appeared on the object, filling in the space between the lines, as well as the lines themselves. It had a slightly jagged appearance at first. Tom touched yet another button, and the surface smoothed out. Once again, the object had an almost photographic quality about it. Then Tom used the ball that was sunk into the table - he called it a "rotator" - and used it to rotate the image from left to right, or from top to bottom. Tom added that the rotator could likewise be used to draw lines or arcs. "Though most of my draftsmen prefer to use the pen."

As the others shook their heads in astonishment, Tom went on: "Actually, drawing with the electrodrafter isn't really any faster than using a traditional drafting machine. It's the editing feature that sets it apart from regular drafting. If you have to change something on paper, it takes a while to erase and then redraw it. The electrodrafters makes editing a breeze by comparison!"

"Using the electrodrafter's really made a difference," Bud put in. "Tom's been able to redesign his giant robots for the Cidatel." Bud was referring to the Swift's own nuclear power plant out in New Mexico. "No more easy-to-break punched paper tape for instructions. Now they use solid-state microbrains similar to Tom's 'Little Idiots'."

And those were the second-generation robots. Tom came up with an even better model that can move much more smoothly than the first two types. He's even redesigned the Space Solartron for much better efficiency. Remember how large the solar panels were that powered that thing?"

The others nodded. "Now the machine's been reduced to a tenth the size of its former self, and performs much better. Plus, an even newer model that's smaller and more efficient than *that* one!"

Tom grinned. "Well, using my midget atomic motor helped there as well. Anyway, I want to show you the idea I had in mind for our proposed 'Outpost II'. Let's go over to the main lab where I can sketch it on - "

He broke off at the sound of a horrendous crash just outside the door of the laboratory.

CHAPTER FOUR: STRATEGIC PLANNING

The others whirled around in surprise. Into the lab came a large service cart, filled with trays, their lids now knocked askew. It was pushed by a young lady in her late teens.

Tom grinned. "Hi, Wendy! What happened? Did you run into one of the automated carts?"

Wendy Winkler, granddaughter of the legendary Charles "Chow" Winkler, looked up from her attempts to get the trays back in order. "Yes, Tom," she answered. "I sure wish you would do something about those things!"

Vic looked at Wendy in surprise. "You're Wendy? You've - you've really grown!"

The last time Vic had seen Wendy had been in a picture Chow had shown him years ago. She was just four years old then. Now, at eighteen, she was as slender as her grandfather had been fat. Shoulder-length red hair with bangs, sparkling green eyes, a heart-shaped face, evenly proportioned body, she caught the eye of most of the young engineers and unmarried staff members. Currently, she was dating Hank's son Brad.

Wendy flashed him a smile. "Hopefully I look better than I did in that horrible picture gramps always carried around!"

"Aww, c'mon!" Curly spoke up. "You looked cute in that!"

"Say, where is Chow, anyway?" Vic asked.

"Didn't Tom tell you?" she asked in surprise.

The others shook their heads. "Gramps retired about five years ago. Before he did, though, he started teaching me how to cook here. Of course, he'd been teaching me cooking for years. But he soon

brought me here and showed me what to do. He's now living back at his ranch in Abeline." She turned back to Tom, hands on her hips. "In the meantime, Tom, would you do something about those robot carts of yours?"

Tom nodded apologetically. "Sorry. You're right. I'll have to see about installing a special signal unit in your service trays, so the automated ones will defer to them. Anyway, I'm glad you brought us something to eat. We're starved!"

She grinned impishly. "I'm sure you are! But I only brought a light snack."

Bud paused as he reached to lift up a tray cover. "Huh? How come?"

"Because of tonight, flyboy!" she said with a laugh. "Tom's mother and Phyllis are fixing a small feast, and it won't do to have your appetites ruined!"

The others laughed while Bud gave her a mock grimace. "Kids these days, Tom! Trying to starve a poor, hard-working pilot!"

Tom roared with laughter. "Oh, of course!" He winked at Wendy. "Hope you brought our hard-working pilot a carrot stick and a piece of lettuce!"

Wendy grinned in turn. She always enjoyed the banter between Tom and Bud.

Bud removed the dish to reveal warm roast beef sandwiches and french fries. "Best looking carrot stick I ever saw!" he joked. The other men dug in with gusto.

Afterwards, Tom turned the tour over to Bud. "Continue showing the others around. I need to talk to Dad about the attack today."

Bud nodded. "Go right ahead, Skipper. I'll take them over to the new gymnasium we put in a few years back."

Tom took the jeep over to the administration building. Inside, he said hello to the Swift's ever-efficient secretary, Miss Trent. He knocked on the door leading in to the office the two Swifts shared.

"Come in," he heard his father answer.

Tom opened the door and entered. He wasn't too surprised to find both Ned Newton and Harlan Ames in the office along with his father.

Both Toms shared a similar appearance: blonde hair, blue eyes, rugged features. Ned Newton, Tom Sr.'s boyhood friend and the owner of Newton Construction, was tall with brown hair and hazel eyes. Harlan Ames, the Swift's chief of plant security, stood about six-foot-one, and had broad shoulders.

"Hello, Dad. Uncle Ned. Harlan." Tom greeted the three men.

Tom Sr. smiled. "Good to see you still in one piece, Tom." He quickly sobered. "Tell us what happened, starting with the launch of the transphotonic engine missile."

Tom went into detail about the attack in space, the meeting with Vic and the asteroid crew, the return to earth and the attack on the *Sky Queen II* by the rogue drone plane.

"My men are in place, Tom," Ames said after Tom had finished speaking. "No one's been allowed on board."

Tom nodded. "Good. You and I will examine the *Queen* as soon as we finish up here."

Tom Sr. looked grave. "I've little doubt you'll find the transmitter, but there might not be anything left of it. Or worse - it, too, could be rigged to explode."

Tom let out a whistle. "You're right, Dad! I hadn't thought of that." He turned back to Harlan Ames. "We'll have to proceed with caution."

"Absolutely," Ames answered.

Ned Newton spoke up for the first time. "I can't tell you how concerned I am that the Black Cobra is back. He's one of our most dangerous enemies. I'm also puzzled at his desire to obtain the transphotonic engine. What could he want with it? It's not the sort of invention that could be turned into a weapon. And space outside the solar system is too unknown for him to have any plans for it yet."

Tom Jr. shrugged. "It could be just envy. I invented it, so he had to have it."

Tom Sr. shook his head. "I doubt that, Tom. This isn't Cosmo Kinkaid we're talking about," he said, referring to the Swift's former enemy and competitor. "The Black Cobra is far too cunning and ruthless for something like that. No, he has some definite plans for the transphotonic engine. We're going to have to find out - "

He was interrupted by a buzz from the intercom. Pressing a button, he said, "Yes, Miss Trent?"

"Sir," came the receptionist's voice, "you have an incoming call from John Thurston at CIA headquarters in Washington."

Eyebrows were raised all around. "Put him on," Tom Sr. said.

The familiar voice of John Thurston came through on the speaker.

"Tom Swift Senior?"

"Go ahead, John. Tom's here was well, along with Ned and Harlan."

"Great! Glad to hear it. Because I need to speak with Tom Junior and Bud Barclay as soon as possible. Can the two of you come up here tomorrow?"

Tom raised his eyebrow, then answered. "That's rather short notice, but yes, we can make it. I take it this is an urgent matter?"

"It's of national importance!" came the startling reply. "I can't tell you anything further than that!"

"We'll be there, John, don't worry," Tom Jr. spoke up.

"Excellent. I'll see you in tomorrow morning." He hung up.

Tom turned to his father with a wry grin. "Guess we'll be packing our bags right after the party!"

Tom Sr. nodded. "Mary won't be too happy about your having to leave so abruptly, but I know she'll understand."

"So will Phyllis," Ned threw in with a grin of his own.

Tom blushed slightly, then turned back to Harlan Ames. "Harlan, let's get going. The sooner we locate and remove that transmitter, the better. By the time we finish, the information from the data box should be complete."

They left the office and took the jeep back over to the *Sky Queen II*'s landing pad. Then, starting from the outside, and working their way into the interior, the painstaking search began.

Minutes soon turned into hours. Then Ames's voice rang out. "Tom! Come and look at this!"

Tom had been up on the third floor of the *Sky Queen*, inspecting the cockpit. Not bothering with the elevator, he hurried down the ladder and into the electronics lab. Harlan pointed to a small, transparent plastic box of screws.

"Don't touch it, Skipper," he warned. "I almost did. Look at it

very closely."

Tom did so, and gasped. What looked like a random pile of screws was actually a small device with almost no moving parts. Save for one: a tiny digital timer. And it was showing less than one minute.

CHAPTER SIX: A WING-DING PARTY

The screws were just a single plastic shell, painted to look like separate pieces. The explosive must be inside, Tom reasoned. He placed the box under a large lighted magnifying glass. Tom could make out barely visible filaments of wire under the box's cap.

"We can't open it," Tom told Harlan Ames. "It's booby-trapped."

"Tom, we barely have thirty seconds!" Ames told him.

Tom nodded. Then an idea occurred to him.

Moving quickly, he used his small soldering pencil that he still carried with him. It took only a moment for the tip to become red hot. At once, Tom burned a small hole in the top of the plastic box. With less than fifteen seconds remaining, Tom moved to the other part of the lab where the chemical apparatus was.

Tom grabbed a small tube of what looked like bathroom caulk, removed the cap, and stuck it in a caulk gun. He proceeded to squirt the curious white material into the plastic box, where it hardened almost at once.

"Hit the ground, Harlan!" Tom cried out as he did so himself. Ames joined him, hands over ears.

There came a muffled *BAMF!!* sound, followed by the crash of glassware and thuds against the wall.

Removing their hands from their ears, the two men stood up on shaky legs. Tom surveyed the damage: some of the chemistry glassware was shattered. Fortunately, he had nothing of volatile or corrosive nature in them. The walls were fine, though bits of the plastic box and the white material stuck to them. Harlan Ames walked over and touched the white material.

"Caulk?" he asked, eyebrows raised.

Tom shook his head. "Liquid durastress. Same substance that I use for my atomic engine. Hardens almost instantly when applied to air. I'm glad I got enough in there to cushion the explosion. The bomb was probably designed to do a great deal of damage to the *Queen*. Hold on a minute." Tom walked over to a cabinet and removed a small can. "This is similar to Soluweb, what we use at the Outpost to remove the strands from the SuperCrab. It'll dissolve the durastress so you can run an analysis on the bomb fragments."

Harlan nodded. "Thanks, Tom. I'll get right on it."

At that moment, the intercom buzzed. Tom walked over to it and punched a button. "Yes?"

"Hey Tom!" Bud's voice came through. "If you don't want to miss the party of the year, you'd better hurry up and get changed!"

Tom looked at his watch with dismay. It was already close to

six-thirty. "Ohhh, this took longer than I thought!"

"Did you find the homing device?" Bud asked.

"Yes, and it was booby-trapped. Don't worry, I took care of it. Now I'd better hurry up and get changed. Meet you at the parking lot in about a fifteen minutes."

"Right. I'll be waiting."

Tom punched the button off. "Hate to leave you with this mess on your hands, Harlan."

Ames grinned. "Go on, Skipper, and have a great time. Leave this for me. We don't have to guess who sent it, but I may be able to trace where it came from."

"Let me know when you do," Tom said as he headed towards the ladder.

"That I will, Tom," Harlan replied.

Tom made his way down the ladder and headed for the administration building. There, he and his father had bathroom facilities and even a change of clothes. Before long, he had shaved, showered, and dressed in more formal clothing. Tom made his way to the parking lot, where Bud waited in his latest sports car.

The gates of Swift Enterprises opened automatically as they left, and closed behind them. Bud opened up the throttle as they roared down the road to the highway. Gas was cheap these days, thanks to the proliferation of Tom's atomic motors and G-Force Inverter. It was barely a nickel a gallon. So, most roads had high speed limits.

They reached Tom's home in record time. It was just about seven o'clock. The house was all lit up. Around back, music could be heard playing on specially designed speakers Tom had invented a few years back. Tom opened the front door and they went on inside.

"Hello, Tom, welcome back!" his mother greeted him. Then another girl, a pretty brunette with brown eyes came up and gave him a kiss. "Hi Tom!" Phyllis Newton greeted her fiancé. "Tell us how your first experiment with the transphotonic engine went!"

Tom and Bud exchanged glances. "Well, Phyllis, it was, for the most part, a success..."

Tom got no further when the alarm went off. The Swift home was protected by an electromagnetic field. Friends and family wore special devices in their wrist watches that prevented the alarm from going off.

Tom hurried back to the front door. Over the doorframe was a large dial that showed how much metal a visitor carried on him. Tom had improved on that by adding a special camera that displayed a thermographic image of the visitor. Guns or other lethal devices would show up very clearly. Further, Tom had added a small repelatron that would act against metal or fiber, preventing an unwanted intruder from entering the front door.

The needle on the dial only raised a little bit, and the thermograph showed nothing of harm. But Tom hardly glanced at either. He already had a good idea who it was. He flung the door wide open.

"Hello, Wendy, come on in!" he greeted her.

"Oh, hi, Tom!" she said, looking embarrassed. "I'm sorry, but I forgot my modified watch."

Tom shook his head. "No need to apologize. It's my fault - I've been meaning to customize your other watch for years. Remind me one of these times to get around to it!"

Wendy soon joined Mrs. Swift and Phyllis in the kitchen, helping to organize the food and snacks. On the grill out back, steaks and chicken sizzled.

Wendy had to be careful not to step on the tail of Sandy's Siamese cat Tao Zia, who had come to the front door as well. Some years ago Sandy had been trying to find one of her bloodhounds that had escaped its pen. She had tracked it through the small forest near the Swift's home. As she neared the main road, she heard a car slow down and saw something being thrown from it. The car zoomed off, leaving behind a strange squawling object. Sandy investigated, and was shocked to find a small kitten crying in pain and fright. After locating her bloodhound, Sandy took the kitten home. A local veterinarian said the kitten had been too badly injured by the fall and would soon die. But against all odds, Sandy nursed the kitten back to full health. She was still angered at whoever would abandon such a beautiful creature. Part of the reason for the abandonment was obvious: the kitten was malformed - it had no right rear leg. But the kitten's love for Sandy ignited a fierce will to live. Having only three legs hardly slowed down Tao Zia. The cat could jump or fight with all the power of any four-legged Siamese. The cat was friendly with other members of the Swift family, but completely devoted to Sandy. He even stood up to Sandy's bloodhounds! Tao Zia soon returned to the back porch and nimbly leaped back up into his plush basket where he remained the rest of the evening, observing all who came and went, devouring the occasional snack that came his way, and giving himself a bath every now and then.

Mr. Swift, Ned, Hank Sterling and his son Brad, Vic, Curly, and the rest of the asteroid crew soon showed up. Mrs. Swift, Phyllis and Wendy began bringing out the food and *hor' d'oeuvres*. Before long, Phyll announced that the steaks and hamburgers were ready. Everyone quickly grabbed a plate, and a line formed around the large grill. Suddenly, as they began to make their way to the tables on the back porch, the Swift's alarm went off again.

"Let me check!" Bud said.

Quickly, he made his way to the front door. To his surprise, nothing registered on the metal dial. Or the thermograph. Curious, he opened the door and looked outside. No one was there. Bud gave the grounds a quick going over, but discovered nothing. Puzzled, he returned to the party out back.

"Tom!" he exclaimed. "No one's out front! Could they be trying to come in from the woods?"

Before Tom could answer, there came an odd rippling sound, much like a flag in the wind. As one, they all looked up and gasped. *There, overhead, was a man in a parachute heading straight down into the backyard!*

As Tom prepared to take action against the intruder, he noticed that the man's parachute was oddly shaped. Rather than the traditional hemisphere, this one was rectangular. There were two small flaps at either end of the canopy - controlled, Tom noticed, by D-rings the man was constantly pulling. With meticulous care, he landed without a hitch not far from the astonished onlookers. He didn't even have to tuck-and-roll, he just walked quickly forward some six or seven steps. Then he was down.

"Hi Tom!" came a familiar voice. "Hope you don't mind, but I

always did want to crash a party!"

The man removed his mask, revealing the jovial face of Rance Gorman!

"Rance?" Bud asked, still amazed. Rance nodded.

"Rance, this is one of your most outrageous stunts ever!" Tom exclaimed, hardly able to keep from laughing.

Rance Gorman had joined Enterprises years ago as an assistant lab technician. Even then, he'd been quite the practical joker. In fact, that was how he got his start at Enterprises: by playing several practical jokes on Tom and his friends. He was soon caught by Harlan Ames, who was none too gentle with him. But Tom saw considerable potential in Rance, and offered him a summer job. Tom's acumen was well rewarded. Rance worked under Jonas Cord, a tough, demanding individual. In spite of that, an undercurrent of respect soon developed between the teenager and the older man. When it came Jonas's time to retire, he recommended Rance as his replacement. Tom had heard a lot of good reports about Rance - in spite of his penchant for practical jokes, which had never died out completely - and was more than happy to accept him. And, in spite of his fun-loving nature, Rance ran as a tight ship as his former boss. Still, he never did pass up the chance to play a good prank now and then.

But nodded in agreement with Tom. "And where did you get that weird parachute? Never seen anything like that before!"

"Oh, it's just something I whipped up in the lab!" Rance joked. Seeing Bud's stare of disbelief, he held up his hands. "Okay, okay! Actually, it's a bit of a secret."

Tom blinked. "A secret?" Then he heard some laughter behind him. He whirled around, and stared at the grins on the faces of his father and Ned Newton.

Tom Swift Sr. laughed again. "Don't be too hard on Rance, son! The idea of what we're naming the *glider-chute* is actually both mine and Ned's. We planned on using Bud to test it with, but Rance here caught on to what we were doing, and practically begged us to let him be the one to test it. Then we came up with the idea of letting him test it by diving straight in to the backyard during the party. However," he turned and frowned slightly at Rance. "What happened to your wristwatch?"

Rance was still grinning. "Oh, I couldn't resist giving everyone a scare by not wearing it!"

Tom laughed. "Well, you certainly succeeded in doing that!"

"If the excitement is over for the night," Mrs. Swift said with a wry smile, "I think it's time we all ate, before the food gets cold."

"Hear hear!" Vic and the other cheered. As Rance and Bud gathered the collapsed chute and carefully folded it up, Tom Senior told Tom Junior how the military was already showing interest in the new type of chute. "They believe it will help future troops land with almost pin-point accuracy on a battlefield."

The party was a huge success, and the guests didn't leave until about midnight.

The next morning, Tom and Bud flew the *Sky Queen II* to Washington DC. From there, they were met by a CIA staff car, which drove them to the Agency's headquarters. The car, like most modern cars, used one of Tom's microatomic power plants, and was completely silent. The skies above Washington DC were clear and blue, the problems of air

pollution having long since vanished. Coal-burning plants, like internal-combustion engines, were a thing of the past.

Tom met with their long-term liaison in the Agency, John Thurston. They shook hands, and soon Tom and Bud were shown to John's office.

As soon as they were seated, Tom asked, "Sir, what is your news? Is it something to do with the Black Cobra being back?"

John nodded, and gave Tom a grave look. "Yes, that's certainly part of it. I trust you were no more surprised that we were at that discovery. We've long suspected the body in the mini-sub was a fake. But the Black Cobra's return isn't the worst of it!"

CHAPTER SEVEN: A VIEW OF THE PAST

"The Black Cobra's return isn't the worst?" Bud asked, incredulous. "What could be worse than that?"

"Plenty, I'm afraid," John said. Then he paused.

"Go on," Tom said, not knowing what to expect.

John remained silent for a few moments. Then he turned to Tom and asked, "Tell, me, Tom, what do you know about the history of the two countries Brungaria and Kranjovia?"

Tom blinked. "Well, of course Bud and I have had many run-ins with them in the past. But as to their history, let me think a moment." Tom turned over everything he knew about the countries in his mind.

"Both countries were formed just after the Second World War, I believe," Tom began.

John nodded. "Correct, Tom. Brungaria was the first, formed from leftover pieces of Hungaria, Romaina, Czechslovakia, and Yugoslavia."

"It had something to do with the second Russian Civil War," Bud spoke up. "Isn't that correct, sir?"

John nodded in his direction. "Yes indeed, Bud. As you've probably heard in your history classes, Russia had been devastated by the Nazi invasion, and fought back hard. The net result was the huge popularity of the military, something Stalin and the rest of the Politburo couldn't stand. The military's new-found popularity threatened to upset the delicate balance of power between the three branches of government: the Politburo itself, the military, and the KGB - known as the NKVD in those days. So, Stalin planned on assassinating his top generals and admirals. Fortunately, they caught wind of it in time, and launched a counterattack - and thus the second Civil War for Russia began. Fortunately for the Allies at that time, Russia had destroyed enough of the Nazi armies that the rest of us

were able to finish the job. Meanwhile, Russia almost tore itself apart. There'd been a long-suppressed hatred of Stalin and his bunch, so there were uprisings all over the place. Moscow was invaded, and Stalin was killed while fleeing to his winter palace. Meanwhile, the very worst of the Politburo and NKVD fled into wasteland to the west. There, they formed the nation of Brungaria. It wasn't much of a nation at the time, but they'd learned at the feet of Stalin, so they brought it into order in a very short time."

Tom nodded, remembering. "But not for long, if I remember correctly. There was a lot of in-fighting within their government, and Brungaria ended up having its own civil war!"

John replied, "Quite right, Tom. Instead, a small sub-section of the Brungarian government - which was hardly a year old - fled to the south, and formed its own dictatorship, Kranjovia."

"Named after their leader, Marc Kranjov," Tom said.

"A real political hot-head," John said with a nod. "Well, you know how the rest of it went."

"Yes, sir. In the post-war years, Russia slowly developed into something approaching a democracy. Oh, it still retained its new title the Soviet Union. But with Stalin gone, most of the people there just paid lip-service to Marxism, and the KGB often looked the other way when small to medium-sized businesses were formed. Russia, I believe, had other worries: Communist China to the southeast, Communist Korea to the far east. Then the countries just south of China fell to communism: Thailand, Cambodia, Vietnam. I remember there was a lot of talk about sending in troops - or, at least, military advisers - to oppose the continual collapse of countries to communism."

John nodded. "Yes; fortunately, wiser heads prevailed. We realized that if Russia could give up its hard-core Marxist fanatics, the other countries would as well, given time."

"Which is what happened, slowly, over the years," Tom said.

"Particularly with the spread of Swift technology!" Bud put in with a grin.

"Well, that probably helped," Tom said modestly. "We've been finding out over the years that consumerism isn't the *bete' noire* it's been painted as being. A healthy consumer economy tends to aid a stable government."

John laughed. "As we found out as well, when we gave up that preposterous income tax of ours, and switched to a flat tax."

Bud shot him a glance. "Yeah, I read about that in high school. Something about those old income tax forms being so complicated that not even Albert Einstein himself could figure it out?"

Brad nodded. "Yes, indeed, Bud. There was a newspaper article on it back in the early 1950's. That very article acted as a catalyst for a bipartisan group of representatives and senators to finally do away with the income tax and establish a flat tax. There was some inequity with the poor at first, but that didn't last very long. Soon everyone was benefiting from it." He stopped. "But we're getting away from the main point of our discussion, I'm afraid."

"Sorry," Bud said a bit sheepishly.

"Which is what?" asked Tom.

"That there seems to be some sort of reconciliation going on between Brungaria and Kranjovia."

Tom raised his eyebrow, but didn't look very alarmed.

"If memory serves, that's hardly the first time they've tried to patch things up." Tom commented. "Usually it would last a few months at best, then fall apart."

John nodded. "I know, and ordinarily I would agree. But not this time. You see, we've identified the man who is trying to bring the two countries back together." He reached into his drawer and pulled out an envelope. Even before John removed the photo Tom, with a sinking heart, knew who the picture was going to be.

"Here he is. A photo of the man we thought dead many years ago."
The Black Cobra!

CHAPTER EIGHT: DESTINATION: BRUNGARIA!

"So that's what you meant by the situation being worse than just knowing the Black Cobra was alive!" Bud exclaimed.

Tom shook his head, baffled. "But working with both the Brungarians and the Kranjovians? Why? Always before, he's worked with a small, dedicated team of scientists. Why the sudden change?"

John Thurston nodded. "That's what we'd like to know, Tom. And the main reason why I called you both here today. I'd like you to go in undercover for us. The US, as you well know, can hardly be officially caught spying in either country. But you two could go in as some sort of tradesmen..."

Tom stared at John in disbelief. "John, are you feeling all right? Go in as tradesmen? John, they'd spot Bud or myself fifty miles away!"

Bud gave a wry grin. "Yeah, I imagine every school boy or girl there knows our pictures by heart - and not because they like us!"

"Oh, don't worry about that," John replied with a knowing smile. "You let us worry about disguising you. We have some experts who could make sure your own mother - or fiancé - wouldn't know you!"

Tom and Bud exchanged dubious looks. They remembered all too well what happened the last time they tried to infiltrate the Black Cobra's lair.

"I know what you're thinking," John went on, "and I repeat: don't worry. We know how to handle this."

Tom sighed. "You're right, of course. We need to find out just what the Black Cobra is planning. And why he wanted to steal my transphotonic engine."

"Sandy's not going to like this," Bud commented wryly. "And neither is Phyllis!"

Tom nodded. "I know. We'll have to assure them that we're going to come back in one piece. And," he mulled over a thought or two, "I think I may have a plan to ensure that!"

After discussing final details with John, Tom and Bud returned to Enterprises the following day. In their main office, Tom, Bud, Tom

Sr., and Harlan Ames began to plan the undercover operation.

"Assuming their disguises work," Harlan said, "you're still going to have a lot of ground to cover. It could take you weeks before you uncover a clue about the Black Cobra's current whereabouts."

Tom shook his head. "We don't have weeks, Harlan. We've got to find out as soon as possible. With that in mind, I've come up with a better way of finding out." He walked over to one of the electronic drawing boards and punched in some commands. At once, the image of a device appeared. It looked for all the world like a cheap wrist watch.

Harlan Ames raised his eyebrows. "I assume that's no ordinary watch."

Tom nodded. "Correct. These are modeled after ordinary Brungarian watches. But tap the side of the watch in a certain pattern, and the sweep seconds hand will point in the direction of any traces of anti-proton particles."

"Even if they're below ground?" asked Bud.

Tom shook his head. "Don't worry, Bud. Some anti-proton particles have probably been leaking out since the Black Cobra returned to earth. Not many, and not enough to damage anything. But definitely enough to be detected." Switching off the image, he turned back to the others. "Now, Bud and I will be travelling to several of Brungaria's major cities, starting with Gerstandt. We'll nose around there, then make our way over to Yulsavisk, Strazenburgh, then Berginzk. Those cities are at what amounts to the four corners of the country. If we don't find any traces of them there, then we'll make our way across the border to Kranjovia. Kranjovia's shaped like a lopsided trapezoid, so the next four cities we visit will roughly be in a circle: first Donski, then Patrolla, followed by Astroughsh, and ending in Borkarskiv. We'll have to move fast, not staying in any city more than a few hours."

Bud let out a whistle. "Skipper, can we actually cover that many square miles without calling attention to ourselves?"

Tom grinned. "Bud, what else would a couple of street merchants selling firewood be doing?" Tom went on to explain that street merchants were permitted to wander about, more or less in freedom, without much suspicion. "Oh, occasionally they're pulled over and everything they have is seized, but that hasn't happened much of late. The Brungarians are only too well aware that they need people like the street merchants, if only to keep their faltering economy going. And Kranjovia's even a bit more relaxed about it."

Mr. Swift shook his head. "That may be, son, but I'm still not very happy about this. You two are taking extraordinary risks."

Tom nodded. "I know, Dad. I'm not exactly thrilled about this either. But we'll be taking further precautions."

Harlan raised an eyebrow. "Like what?"

"For one thing, our wagon, which will be airdropped in just over the border along with us, will have certain almost undetectable modifications. I'm going to install some miniaturized repelatron, along with an equally small G-Force Inverter. If we get caught or pursued, I can quickly unhitch the horses and take to the air. Bud and I will also be carrying a pair of quick-eject repelatron guns, much like the kind I used on the Brungarians in Aurora City, only smaller. Both of us will carry tiny tool kits with us, complete with lock picks."

Harlan shook his head. "Tom, items like that will be could be found only too easy."

"Not the way we plan to conceal them, Harlan!" Tom said with a wry grin. Quickly he explained his plan. By the time he finished, even Mr. Swift gave a nod of admiration.

"Well-thought out, son. I should have realized you'd have covered all the bases." He sighed. "I guess if you're going to do this, you might as well get started."

"Right, Dad." He turned to his friend. "C'mon, Bud. We have a lot of work to do in a very short time."

The next few days, the machinery shops at Enterprises ran day and night, turning out the small items Tom had designed. Tom supervised the building of the cart. Bud, in turn, managed to get ahold of Dr. Anton Faber, their long-time zoologist friend. Dr. Faber soon located horses that would be native to Eastern Europe. When the time came, the horses would be carefully sedated before being airdropped into Brungaria's northern border. Along with the rest of them.

The first phase of Tom's plan was for he and Bud to paraglide across the northern Brungarian border. There, they would assemble the cart, load it with firewood, and hitch up the horses. The next morning, they would make their way into Gerstandt. Even with all of the makeup, both men knew it was going to be risky. In addition to the work on the wagon, they spent hours learning both the Brungarian and Kranjovian languages and faking the gruff accents of their street merchants. "Fortunately," Bud remarked to Sandy a few days later, "their street merchants don't talk much. And when they do, it's usually in the form of half-intelligent grunts."

Sandy shook her head, worried. Bud's face and skin was now several shades darker, thanks to special tanning booths the CIA used. When Bud told her about them, and how they used long tubes that emitted ultraviolet rays, she made a feeble joke about how the CIA should release them to the public. "A lot of girls I know would love to use them to get a head start on their summer tans!" Bud laughed as well, and said he'd pass the idea along to Tom. But inwardly he was just as worried as she was.

Tom was too, but he didn't let his worries stop him. Instead, he worked feverishly on perfecting both his role and his tools. Hardly touching any of Wendy's tasty meals, he worked well into the early morning hours, catnapping on the lab's cot for about an hour or so, then resuming work. He became short-tempered around colleagues and friends. Once, when Bud suggested that he take a break and go on a double-date with Sandy and Phyllis, Tom snapped at Bud, "A date? Are you crazy? I'm having all sorts of problems with the microrepelatron watches, and they need to be ready in the next few days! We don't have time to indulge ourselves, Bud. Now *get back to work!*" With that, he all but slammed the door in his friend's face. He marched over to the lab bench and crumpled up a piece of paper with a half-finished circuit diagram on it.

Several more hours went by as he tried design after design, none of which seemed to hold promise. Wearily, he sat on the cot, his face in his hands. Tom felt bone-tired, as though he'd been carrying the weight of the world on his shoulders. *Maybe Bud's right*, he thought. *I'm so worn out I can't even think straight. Yet, we're so pressed*

for time. Every day, every hour, gives the Black Cobra that much more time to complete his own plans. I seriously doubt the man lets a little thing like fatigue slow him down...

Before Tom realized it, his body had slumped over on its side. Tom lay half on, half off his cot. Hours later, he woke with a gasp. "No - !" he cried out, then fell back onto the cot. It had only been a dream. Or rather, a nightmare. He and Bud had been cornered by the Black Cobra in his old Argentina castle. There was no place for them to go. The Black Cobra had whipped out an immense antique broadsword. Rather than stabbing them with it, the man had thrown it straight at them, like a spear. The last thing he remembered was the feeling of the sword as it sliced through his stomach...

Panting, he glanced up at the clock. He had been asleep a good four hours. He groaned in dismay. All the same, the sleep had helped. His mind felt clearer; already a new approach to the microrepelatron watches began to form. Before he began to sketch out the idea, Tom realized he had something else to do.

He walked over to the phone on the wall and punched in a number.

"Hello?" he heard Bud say.

"Bud? It's me, Tom."

"Skipper? You okay?" Bud sounded worried.

"Yeah, uh, I'm fine." Tom paused a moment, then went on. "Look, Bud, I'm sorry for barking at you like that earlier. You were right. I really needed a break. In fact, I just woke up from a very-unintentional nap!"

Bud's grin was easy to hear. "Hey, that's great, Tom! And don't worry about yelling at me. I knew you were under a lot of pressure. Still are, in fact."

"Yes, we both are. But that doesn't excuse blowing up at you like that. Anyway, regardless of what it does to my work schedule, I've decided to take you up on that double-date. Go ahead and get it set up. I'll get showered and changed. Meet you at the front entrance in about an hour."

"You got it, Skipper!" Bud replied, thrilled to hear Tom sounding more like his normal self. "I'll call Sandy and Phyllis right now. You know how long it takes the girls to get ready!"

After hanging up, he quickly sketched out the new idea, then began to flesh it out on the Magic Mirror. As he worked at the table, Tom decided to put together a crude prototype at the same time. To his delight, he was able to assemble the device with little difficulty. It was powered by a tiny Swift battery.

When a glance at the clock showed that a half hour had passed, he saved his work and knocked off for the day. Twenty minutes later, shaved and wearing semiformal attire, he waited by the guardhouse. Soon Bud drove up in his atomicar convertible. Phyllis and Sandy waved to him.

"Hi, Tom!" said Phyllis with a smile. "I'm glad Bud was finally able to drag you away from those musty test tubes!" she teased.

"And Bunsen burners!" Sandy threw in.

"Sorry, girls," Tom replied with a grin. "No test tubes this time. More like soldering guns and transistors. Seriously, I'm glad as well. I've been away from all of you for too long." He turned to Bud. "Where are we off to this time, pal?"

"Nothing but the best for our ladies," Bud answered. "The

Eagle's Lair!"

The girls let out whistles, and Tom threw his friend a look. "Sure hope your wallet is stuffed with green! That place is expensive."

The Eagle's Lair, a five-star restaurant, was located at the top of the sixty-six story Duncan building, a newly completed skyscraper in downtown Shopton. It was reached by scenic elevators.

"Don't worry, Tom," Bud replied. "I've got it all taken care of."

Tom gave a slight frown of suspicion. What was Bud up to? But for now, he put it out of his mind. He climbed into the back seat with Phyllis. "You look terrific, Phyl," he complimented her.

She smiled at her fiancé. "As do you, Tom." She quickly hid her private thoughts. Even a shower and a shave couldn't disguise the dark spots under his eyes.

Bud turned on the radio, and soon the air was filled with lively banter. The wind and road noise couldn't drown out their conversation, and the motor, of course, made no sound.

A valet let them out and took over the car. Tom noticed Bud giving the man a large tip. He still wondered how Bud was able to afford all of this.

They entered the lobby, checked in with security, and made their way to the scenic elevators. Fortunately, they were able secure a cab to themselves. The girls gasped in awe as the ground dropped away, and the city-wide panorama opened up. For his part, Tom was pleased at the smoothness of the ride. While the elevator was attached to a cable, it did not use an electric motor to hoist it with. Instead, it used a repelatron located on the bottom. The cable acted as both an anchor and a fail-safe, should something go wrong with the repelatron. Further, there were canisters of Durastress foam located on the bottom as well. The foam would help to halt the slide of the cab and act as a cushion upon impact.

The doors soon opened onto the Eagle's Lair elegant dining area. The Maitre De' led the foursome to a table near the windows. Near the center of the room, a small jazz band played some lively songs. Several couples were dancing.

After they placed their order (once again, Tom was amazed at the expensive order Bud had given), Tom asked Phyllis: "Would you like to dance?"

"Need you ask?" she replied in a teasing voice.

"How about you, Bud?" Sandy asked her fiancé. "Let's show these other two how it's done!"

Laughing, the two couples went up onto the dance floor and were soon cutting the rug with the best of them. After four songs, Tom noticed a several waiters with well-laden food trays headed for their table. "C'mon, Bud," he gestured, pointing out the waiters. "Looks like our food has arrived."

Never one to miss a meal, Bud pulled Sandy to her feet, and they began to make their way towards the table. But what the waiters uncovered wasn't food: it was a pair of submachine guns!

"EVERYBODY HOLD IT!" roared one of the so-called waiters. "STAND RIGHT WHERE YOU ARE AND NOBODY GETS HURT!"

Almost at once, from the kitchen area, other gunmen wearing masks emerged. Several women screamed with fright. "SHUT THEM UP!" yelled

the head gunman. "START EMPTYING YOUR WALLETS! REMOVE YOUR WIVES' OR GIRLFRIEND'S JEWELRY! DO IT NOW!!" he barked.

One of the gunmen came right up to Tom's party. "Hand over the wallets and jewelry!" he commanded them.

His face flushed with anger, but not having any choice, Tom reached into his pocket to remove his wallet. And blinked in surprise when his hand brushed a curious object.

The microrepelatron, he thought. *I'd forgotten sticking it in there before leaving. I was going to work on it some more tonight at home.*

All at once, a plan formed in Tom's mind. Ignoring his wallet, Tom pulled out the hexagonal-shaped weapon, which was attached to a leather strap, much like a wrist watch. As he removed it, Tom was adjusting the tiny controls with the fingers of his hand. The controls were mounted on the side of the weapon.

"How about this instead?" Tom asked politely.

"Huh?" the gunman grunted, staring at the microrepelatron in puzzlement. As he did so, Tom activated it.

At once the gunman flew off his feet and crashed the floor, several feet away. He rose to his feet, groggy. He felt as though someone had just hit him in the chest with a sledgehammer. The gunman tried to aim his machinegun at Tom - and gasped a moment later as the gun went flying out of his fist, almost breaking his wrist. The gun flew to the other side of the restaurant, crashed into the wall near the ceiling, then flattened like an empty tin can.

The other gunman, including the leader, turned to stare. At the moment, though, they couldn't see anything. Then another gunman went flying.

Tom began racing around, his agile fingers working the controls with deft dexterity. Gunmen flew this way and that. Guns were crushed.

As the number of gunmen decreased, the leader began to realize who his enemy was. Most of the diners had hit the floor. Only one person was still moving around. Growling, the leader called out, "All right, Swift, that's enough! Any further movement, and this woman gets it!" He picked up an older woman in a green dress. He pointed the gun straight at her forehead. Tom came to a halt.

The leader of the thieves grinned. "Yeah, it's not hard to figure out who is behind this. I don't know what that weird weapon of yours is, but you'd better drop it now. *Right now*, I said!" he barked, as Tom made a motion to raise it. Tom dropped the weapon onto a nearby table.

The man began to back away, still holding the woman in his right arm, the machinegun in his left, towards the scenic elevators. It was time to cut his losses and go. "If it were up to me, I'd have blasted you right here, Swift. Maybe another time I'll - *AHHHH!*" he suddenly grunted and flew back-first into the wall between the elevator doors. He was pinned in place, several inches above the floor. At once Tom grabbed the microrepelatron, which he'd deliberately left on, and shut it off. The leader slid to the floor. The woman he'd taken hostage continued to stare at him, completely bewildered.

Almost at once, the whole restaurant broke out clapping, almost giddy with joy. Tom turned red with embarrassment, but quickly took control. Ordering the diners to use the guidepost ropes to tie up the

prisoners, he, Bud, and the girls searched the kitchen for the real cook and waiters. It didn't take them long to locate them, tied up and locked in the pantry. Before long the police arrived, led by his old friend Chief Rock.

"Well, Tom," the chief said as the prisoners were led away in handcuffs, "I assume one of your inventions is responsible for their capture."

Tom gave a wry grin. "Yes, sir. But, as you might imagine, it's nothing I can comment on at the moment. Besides being still in the prototype stage, it's going to be used in an upcoming mission."

Chief Rock nodded. "I understand. But a lot of people here saw you use it. It doesn't sound as though it's a secret any more."

Tom shook his head. "Sir, they saw me use *something*. But I doubt if they caught more than a glimpse of what it was. Besides, the final version of my, uh, invention is going to look vastly different from the prototype."

The real wait staff, now restored to their proper uniforms, began to prepare the meals while the patrons, under Tom and Bud's assistance, began to clean the place up. Before long, fresh food was brought in, and the music resumed. Some customers, unsettled by the whole experience, left. But Tom's foursome remained. Other diners took confidence in that, and stayed on as well. Soon they started dancing, and others joined them. Tom was inwardly relieved that the girls weren't psychologically harmed by the near disaster. Often, he and Bud had to play down some of their more violent incidents so the girls wouldn't worry too much about them. He wondered now if that was such a wise course. Sandy and Phyllis, he thought, were much tougher than they looked.

Before they left, while Phyllis and Sandy went to use the ladies room, Tom noticed that the Maitre De' was refusing to accept Bud's credit card.

"No no no no!" he exclaimed. "It is on the house, I tell you!" Bud tried to protest, but the Maitre De shook his head once again. "Please accept this as a gift from all of us," he said and tore up the bill right in front of Bud. "It's the least we can do for you!" Bud blushed a bit, then graciously accepted. He shook hands with the Maitre De and thanked him. The Maitre De smiled and said, "No, *mon ami*, it is we who thank you and your friend!"

Bud soon rejoined Tom and said with chagrin, "Well, what else could I do, Tom?"

Tom just grinned at his pal. "Not much," he said, "if you didn't want to insult them. By the way, just how were you able to afford all this, if you don't mind me asking?"

Bud fidgeted a moment, then told his friend, "Oh, uh ... well, your father kind of overheard you when you, um, told me to get back to work. Later, after he heard that you'd apologized to me, he sort of, well, let me know that tonight's dinner would be on him."

Tom stared at Bud, amazed. "Did you tell him you were coming here?"

"Tell him? He was the one who suggested it!"

Tom grinned at Bud's discomfort. "Don't worry, Bud," he said as the girls came over to rejoin them. "I won't let him know I found out. I'll just pretend that you're a 'bud'ding millionaire!"

"Ouch!" Bud replied. "I thought I was the one who did all the

bad puns around here!"

The next day, refreshed from a good night's sleep, Tom continued to work on the microrepelatron and other miniaturized equipment, such as a pint-sized version of his Sonic Boom Trap. Also, a special type of climbing suit, one that wouldn't require ropes or pitons. This time, it went much faster. Within three days, all of the equipment was complete. Tom called in his father, Bud and Hank to give them an overview.

"Now, the microrepelatron will be hidden in these watches. They're easy to control once you get the hang of manipulating the control wheel. It looks like the wind-up knob. But it pops out like this. Then the repelatron are activated. You aim it with this tiny laser. See how it projects a dot of red like that? Well, anywhere that dot is, that's where the repelatron are aimed. You can control the intensity and length of the projection. Now, I'll be installing a backup microrepelatron as well. It wouldn't do to have our watches lost or stolen."

"Where will the backups be?" asked Mr. Swift.

"I haven't decided yet," Tom admitted. "But I'll come up with something before long."

Tom turned to some other devices. "Now these," he said, picking up what looked like ordinary shirt buttons, "are extremely bright magnesium flares. If we're trapped, just rip one off, give it a quarter turn to the left, and toss it. Be sure to turn your head and cover your eyes. They'll burn with nearly solar intensity for about five minutes. And this," Tom picked up an old-fashioned fountain pen, "contains durastress filaments with some interesting modifications. Watch."

Tom turned the gold band surrounding the middle of the pen a quarter turn to the left, and pressed the tiny ball. Instantly, threads of durastress shot across the room and hit the wall. Simultaneously, flanges emerged from the sides of the pen, forming a hand grip. Tom was nearly yanked off of his feet and dragged towards the wall until the tip of the pen touched it. Tom pressed another hidden ball, causing the threads to release from the wall.

"Don't worry about our weight," he told them. "It can easily hold five tons. Now, turn the gold band to the right," he did so, and fired at the ceiling, "and it loses its retracting abilities." This time the threads attached to the ceiling and just stayed there.

"What causes them to stick like that?" Hank asked, amazed.

"Microscopic filaments that bore into whatever they hit. When you press this button, the filaments retract, releasing the threads."

"How far will it go?" asked Bud.

"Fifty feet maximum. That's as much as I could compress into the fountain pen." Tom answered. "Now, for escaping if we're captured, I have - "

At that moment, there was a knock on the door. Hank walked over and opened it. He stared in astonishment.

CHAPTER NINE: TRAINING COURSES

"Chow!" Hank cried out. "I didn't know you were in town!"

Tom, Tom Sr., and Bud turned to stare at the door as well. There was their old friend and favorite chef, Charles "Chow" Winkler.

"Chow, you old spud wrangler!" Bud exclaimed. "How are you doing?"

"Hey, Buddy-boy!" Chow cried, giving Bud an enormous bear hug. "You up to your old tricks?"

"As usual!" Bud replied. He winked at Tom. "Wow, did a supernova just go off in here? I don't think I'll be able to see anything for a week!"

"Why, this little number?" Chow said, proudly displaying his one of his more gaudier shirts. "Shoot, son, Ah consider this shirt to be kinda on the drab side!"

Tom just rolled his eyes. The shirt was a bright canary yellow shot through with neon red and orange stripes that all but glowed.

Wendy came in to the room as well. Her eyes were dancing with delight.

Tom turned to her. "Wendy, did you know - ?"

She nodded. "And I kept it as a surprise!"

"That she shore did!" Chow said, giving his granddaughter a hug.

"Wal, brand my repelatron donkeys, but it's good to see y'all again."

"Same here, Chow," Tom told him. The others agreed.

"Is this just a personal visit, Chow," Mr. Swift asked him, "or are you here on business."

"Mostly just to see y'all again. But," Chow confessed, "I do have a little bit of business to attend to. Nothing for y'all to worry about."

"Oh?" asked Bud. "What might that be?"

"Like I said, Buddy-boy, nothin' to be worried about. It'll just take me a day or so to complete it, then I'm heading back to Texas."

"I understand, Chow," Tom told him. "Bud and I are going to be taking off pretty soon as well. Like you, we also have some business to take care of. In the meantime, though, how about having dinner at our house tonight? We can have a cookout."

"Only if I git to do the cookin'!" Chow boomed. "I ain't whomped you two up anything to eat in ages!"

"Well," Mr. Swift said with a grin, "I'll have to call and let Mary know, but I'm sure she won't mind taking a break from cooking."

"Tha's right!" Chow acknowledged, "You tell Mrs. Swift to take the evening off and leave everything to 'ol Chow!"

That evening, Chow cooked, cleaned, and entertained the Swifts. While his Texas-sized meal of roasted corn, steaks, salad, and spare ribs settled in their stomachs, he strummed his guitar and sang old cattle-trail songs, occasionally joined in by Wendy.

The next day Chow disappeared into downtown Shopton on business of his own. Tom and Bud continued taking care of last-minute details

both at the lab and home. They had a sort of farewell lunch with Chow once more. Then, in the afternoon, they took off in the *Sky Queen II* for the CIA's secret base in Virginia.

For the next few days, the men were put through a grueling course in both Brungarian and Kranjovian languages. They were taught how to fake convincing accents and had to learn street slang. They continued to use the special tanning booths, and make-up artists aged their looks. Finally, at the end of the week, they were put through a simulation.

Dressed in their peasant disguises, they drove a wooden cart full of firewood, pulled by a rather worn-down mule, down a dirt road in the Virginia woods. Fifteen minutes later, they approached a fence with a guard post.

"Halt!" one of the "guards" called out in Brungarian. "What have you got in that wagon?" Tom and Bud were quickly surrounded by "soldiers".

"Just hay, sir," Tom responded. "We are taking it to the local market in Yulsavisk."

"And what makes you think we'll let you through?" the guard asked with a sneer.

"Maybe my fist through your teeth will convince you!" Bud answered, his temper rising.

"In that case, we will kill you first!" the guard replied. Guns were raised, triggers pulled. "And now you would be dead," the guard said with disgust, in perfect English. He sighed. "What just happened, you two?"

Bud looked sheepish. "Sorry. My fault. I forgot I'm - "

" - a lowly peasant who's been brow-beaten over the years into submission!" the "guard" - actually Adam Letenski, their personal trainer, quickly reminded him. "Let's try this again," he told them.

Once again Tom and Bud drove the wagon up to the gates. Tom submitted his papers stating who he was and where he was going. Bud kept his mouth shut.

"Your papers, they are not in order!" the guard stated.

"Yes, they are," Tom said.

"No, they very clearly are not!" snapped the guard.

"Then perhaps," Tom said, reaching under the floorboards, "this might help them to be in order!" He tossed over packages of high quality American cigarettes.

The guard looked down and picked up a package. "Ah, perhaps I misread those papers after all!" He went and opened the gate. Then he turned back to Tom and Bud. "Much better! You'll never get anywhere in a dictatorship unless you learn the fine art of bribery."

Tom gave a wry grin, though inward he felt bad about giving away cigarettes. But, as Adam pointed out, there really wasn't much choice.

They plodded on. Next, they were attacked by bandits. Tom wasn't allowed the use of his gadgets, he had to think his way out. The bandits wanted to kill Tom and Bud, then seize the donkey and cart for their own purposes. The bandits had rifles pointed at them. They ordered Tom and Bud out of the cart. Hands held high, they exchanged quick glances and got out of the cart. As he left the cart, though, Tom pressed a concealed button. He couldn't use his own gadgets, but the CIA had trained he and Bud in the use of the cart's built-in

extras.

After a slight delay, a high-pitched whistle went off, climbing up the scale. Startled, the "bandits", who hadn't been warned of what the cart had built in to it, turned to stare. In that fraction of a moment, Tom and Bud attacked. The bandits had combat training, but nothing like what Tom and Bud had recently endured. Tom ripped the rifle out of one of the guards and slammed it into the man's stomach. Nearby, Bud kicked the feet out from under one of the bandits. He grabbed the rifle and used it to knock aside the other bandit's gun. Tom punched out the remaining guard as Bud finished up the fourth man. They regained the cart and continued.

In the fake city of Yulanski, "secret police" sprang out of fake buildings, demanding papers and wanting to search the cart. This time, Tom knew the bribe would have to be of a much higher caliber. Yet, it couldn't be too high, or the secret police would simply seize the cart and its contents. Instead, Tom had to bribe the secret police piecemeal: he offered them records from a collector's set and small electronic parts - the kind available to the West, but hard to come by in a dictatorship. Each was offered with the promise of more to come the next time they passed through. The secret police stamped their papers and waved them through.

The final test came at the marketplace. Tom and Bud had to appear to be unloading their goods and collecting their money. In the meantime, they had to circumspectly start searching for anti-proton emissions. Both Tom and Bud activated their seemingly cheap wristwatches. The hour, minute, and sweep second hands all moved normally. But the date portion of the day/date window would now start climbing in numbers the closer they got to an anti-proton source. The day indicator would show the direction: Friday was North, Saturday South, Thursday was East, and Wednesday West.

As they wandered through the city, Tom and Bud would glance at their watches from time to time. Tom knew that Adam had hidden a well-constructed container which held a tiny amount of rock from the Caves of Nuclear Fire. The container had an opening in it, allowing trace amounts to escape. The amount was far too small to harm anyone near it, but should be enough to trigger the watches. So far, though, there was no signs of it.

As they were nearing the "outskirts" of the city, Tom suddenly noticed the numbers had jumped from "1" to "3". And the day counter was showing "Wed". Carefully, he moved his arm to the west. The date counter climbed to "5".

"Bud," he cried out. "Over here! I think I've got a lead!"

Bud hurried over and joined him. He found that his watch was showing the same thing. "C'mon, Tom. This way!" He just started to run into the forest, when armed men suddenly sprang from the ground.

"Going somewhere, Americanizky spies?" the leader - obviously Adam - asked in a Brungarian accent.

Tom and Bud's hands flew into the air. They looked at each other, chagrined. Tom turned back to Brad. "Okay, what gave us away this time?"

"Oh, not much," Adam answered in a normal voice. "Maybe the fact that you kept looking at your watches so often. Maybe the fact that you wandered all over the place, even into areas no honest hay merchant would ever go. Maybe you suddenly freezing solid, then

waving the arm with your watch on it in a particular direction. And maybe 'Hey Bud! Over here!' in a picture-perfect American accent had something to do with it." He glared at the two men. "Apart from that, certainly nothing that I can think of."

Tom sighed. Being a spy was a lot harder than the movies made it out to be. "Okay, Adam, you're right. We really goofed that up. Guess we'll have to practice some more."

"Yeah, you will," Adam answered in a stern voice. Then it grew softer. "Actually, fellas, you did pretty good for your first try. Don't feel too bad about it. No one ever does well the first few times. You'll get it right."

Feeling a bit heartened, they reclaimed the mule and their cart, and returned to the beginning of the course. Before they could continue, though, Adam came running up to them.

"Tom! Bud!" he cried out. "We just heard from one of our spies in Brungaria. The Black Cobra's returning to Kranjovia soon. From what we can tell, he's been away for several weeks. At any rate, he wants to have a conference with the heads of Brungarian and Kranjovian science divisions. Our spy feels he might be planning on testing some new device."

Tom and Bud exchanged glances. "The Transphotonic Engine, no doubt!" Bud exclaimed.

"Or his own version of it," Tom mused. "It doesn't make sense, though. The prototype he stole from me had to have been thoroughly destroyed. There's no possibility he could have figured out how it worked from what little remained."

Adam shook his head. "Be that as it may, we're going to have to ship you over there as soon as possible. Sorry to have to abort the training exercise, but we can't delay any further. And forget about parachuting in: We're sending you there via Brungarian airlines tonight."

Tom sighed. "You're right, of course. Whatever it is that the Black Cobra invented, it'll have to be checked in to. I just hope we can act our parts convincingly enough."

Adam nodded. "We'll go ahead and rehearse some more, then get you guys ready for your ten o'clock flight."

So Tom and Bud fell back into training as best they could. They learned how to pass bribes better, come up with convincing explanations, learned how to use both the gadgets placed in the wagon, and Tom's own concealed weapons. By the time darkness fell, they had improved some, but all knew that it would take weeks more of training to be truly convincing. Adam just shook his head. "Well, that's about as good as we can do for now. Just do the best you can." Both boys nodded and headed for the showers. Then they donned their disguises and took one of the CIA's cars to the airport. Before they left, though, Tom put in a private call to his father. He gave Tom Senior a few specific instructions, then hung up. It never hurt, Tom thought, to have a contingency plan...

CHAPTER 10: THE SEARCH BEGINS

At the airport, Tom and Bud marched down the concourse and onto the jumbo jet that was Brungarian Air. The huge jet, Tom noted, was in very poor condition. The aisle was littered with trash, the seats nothing short of filthy. Most were worn, with decaying foam rubber poking through the split vinyl upholstery. The windows were streaked and smeared. He noticed with alarm that some windows had cracks in them. The stewardesses were thin to the point of emaciation and anything but cheerful. They just grunted at Tom and Bud, pointing out their assigned seats. Tom and Bud exchanged grimaces and sat in the seats, Tom next to the window with the large crack in it.

Other passengers shuffled on board. They, too, were a taciturn lot. Hardly anyone said anything. Finally, one of the stewardesses closed and secured the hatch.

As the plane taxied towards the runway, one of the stewardesses picked up the intercom mike. "We are about to take off. You will remain in your seats the entire flight. We will be serving dinner sometime later." That was all. No instructions about safety or what to do in case of a crash. Tom and Bud exchanged grimaces once more.

The takeoff didn't inspire a lot of confidence either. Tom could hear the jet engines lurching slightly as fuel was fed into them. Most passengers would have missed it, but Tom was far too experienced a pilot, his keen ears missed nothing. A quick glance at Bud confirmed that he had heard it as well.

Tom continued to stare out the window at the engines. Their occasional stuttering was alarming. Even more so was the window itself: the crack in the plexiglass (assuming that's what it was) was becoming larger. Tom managed to flag down a cabin steward and pointed it out. But the man just grunted something, and said it was nothing to worry about. Tom wasn't so certain.

When the food came, it was typical Brungarian fare: lukewarm, too spicy, and tasted horrible. Even the water that came with it had a muddy taste. Neither Tom or Bud ate very much.

Seven hours later they stopped in Madrid to refuel. And two hours after that they finally put down in Gerstandt. Tom was amazed that they'd landed safely (though the plane bounced a time or two before settling down on its wheels). The crack in the window had reached the point where Tom was certain it would blow outward if the plane had been at a high altitude fifteen minutes longer.

They disembarked. The airport lobby was rundown and filled with Brungarian secret police who were eyeing everyone, demanding to see papers and passports. Tom and Bud were stopped and searched several times before they finally cleared the airport.

They hailed a cab and, while pretending to snap pictures of Gerstandt's trash-filled streets, they kept an eye on their watches. But the detectors failed to pick up any signs of anti-protons.

Tom had deliberately chosen a small motel on the outskirts of town. For all intents and purposes, they seemed to retire to the room for the night. But in the early hours of the morning, Tom opened up the small bathroom window. Quietly, they both sneaked out. Their "luggage" they left behind, it would reveal nothing of their true identities. And as filthy as the room was, Tom knew it would be days before anyone even thought to see if they were still there.

It didn't take them long to make their way into Brungaria's heavily-wooded forests. They headed north towards the border.

Brungaria's borders were wired off: a huge, twenty-foot fence covered with rolls of razor wire. But that wasn't all. Facing away from the fence on either side were two fifteen-foot tall slanted fences, the slant to the outside. These fences as well were covered with rolls of razor wire. All brush had been cleared away for at least fifty feet. Tom and Bud already knew that the fences extended into the ground a good twenty feet. There was no way through or under the fences. Or over: radar stations guarded the air around the borders as well. So that way was blocked as well. Unless you had a plane that was invisible to radar. Which Tom just happened to have.

Years ago he'd not only rigged one of his jetmarines to be invisible to sonar, but came up with special diving suits that were equally invisible. Then, using the same mike-and-speaker technique, did the same to an airplane. Few people knew that the skin of the *Sky Queen II* had been fabricated on an improved version of the technique.

Tom and Bud didn't go near the borders. Instead, at a special clearing, they found the two horses still slightly drugged, and the cart. There were no parachutes to give them away: everything had been lowered down on repelatrions. While waiting for the horses to recover, the two men went over the cart, making sure all of its special features still worked. Then they loaded the firewood, a hot and sweaty job. Next, they altered their disguises as instructed by the CIA. By then the horses were fully awake, and the cart led back to the main road. Before the sun came up, they looked exactly like any other of the many traders travelling the roads of northern Brungaria.

The search went on for days. Tom and Bud found they had no problems getting into or out of towns. Indeed, bribery was actually easier in real life than the simulations they had trained in. It wasn't until they began approaching the Orgrandazdt Mountains near the Brungarian-Kranjovian border that their detector watches at last began to show some trace indications.

"Due south, from the looks of things," Tom said to Bud.

"Up in the mountains?" Bud asked, looking at the formidable range, an offshoot of the Carpathian Mountains.

"Looks like it," Tom said with a grimace. "The Black Cobra sure seems to have a liking for mountain retreats."

"Yeah, doesn't he though?" Bud reflected, thinking of the Black Cobra's base in the Andes.

They ended up having to cross the southern border into Kranjovia. Getting across was much more difficult than going from one town to another. There was no love lost between Brungaria and Kranjovia, and the border guards reflected that. The men were interrogated, their papers and possessions poked and prodded, the horses and cart thoroughly examined. But, even while they were questioned, Tom noted that the guards harassed them up to a point and no further. He

realized that the traders were invaluable to both countries' economies, and neither one dared to do anything that might discourage them. Tom was further relieved that the guards lacked the intelligence to find any of the cart's concealed devices, and was profoundly relieved when both papers and watches were returned to them.

They made their way to the small mountain town of Quito, located not far from the larger city of Donski. As the horses and cart plodded through the muddy streets, Tom pointed to his watch. "We're getting near, all right." The date was showing the number six, the day between Thursday and Friday, meaning northeast. Tom soon rented a stall and boarded the horses down for the night.

They ate at a nearby tavern. The cold mountain fish and chips came as a welcome relief from the spicy Brungarian dishes. Quietly, the men began to make their plans.

"We won't go hunting for the Black Cobra's lair just yet," said Tom. Bud raised his eyebrows in surprise. "First, I want to see how this town operates at night. We'll pretend to get drunk and wander around at two or three in the morning. Most traders do at one point or another. We'll see who is awake and who isn't. Once we do, it's time to explore the mountains."

"In the dark?" Bud asked, amazed.

Tom nodded. "I won't pretend it will be easy. Mountain climbing is difficult even in daylight. My one hope is that the Black Cobra's lair won't be up very high in the mountains. After all, chances are it's loaded with huge, complex machinery. You don't exactly pull that stuff up with a mere rope. There has to be a large, hidden entrance not too far from these roads. Once we find that, it should be relatively easy to find a smaller entrance like an airshaft."

"It's that 'relatively' bit that worries me," Bud said with a wry grin.

As the night drew on, Tom and Bud began talking, laughing and joking. They took only small sips of the strong Kranjovian ale, but made sure to splash a lot of it down the front of their shirts. Soon they had everyone in the tavern singing old songs. The beer flowed freely. It was almost three o'clock before they left, arms around each other's shoulders, seeming to stumble down the cobblestone roads. However, Tom and Bud's eyes and ears were open wide. Both were pleased to see very few people were out. Someone yelled from a window for them to "shut up and go to bed". A constable shook his club at them menacingly and ordered to back to their inn, but took no other action. After wandering all over the town, they soon returned to their inn and fell into bed. Sleep came quickly.

The men pretended to nurse hangovers the next morning. Secretly, though, they reviewed what they had seen in the early morning hours.

"Everything seems to check out. Just a few people up and around, here and there," Tom stated. "We should be able to avoid them easily."

"What time do we leave here?" asked Bud.

"Around 1:00 AM. We're going to need a lot of time to cover the mountains."

"Got your spider-suit ready?" Bud asked with a grin.

"It's all set," Tom replied.

The spider-suits, as Bud dubbed them, were the new special

climbing suits Tom had created. A single-piece suit, much like a diver's wet suit, it had special gravitex units in the fingers, palm, chest, and feet. These micro-miniaturized versions of Tom's gravitex machine could support over two tons. They were activated by pushing down on the fingers, palm, chest, or feet. Tom thought they would work better than using ropes, piton, or grappling hooks. Both suits were a dull black color, making them hard to spot at night.

During the day, Tom checked on the horses, and a few other special devices. At a nearby market, he and Bud actually sold some firewood, then picked up some more. They dropped hints that they'd be staying another day or so before moving on.

That night they pretended to head off for the tavern again. No one paid them any attention. Soon they had the tavern singing and drinking. So boisterous was the crowd of drinkers that none of them noticed when Bud disappeared. Followed shortly by Tom.

The men met in a pitch-black alley - there was a new moon that night - and quietly headed in the direction of the forests. Before long, they were deep into the woods and headed up a slope. Tom continually checked his detector watch. It was easy to see; Tom had coated the numerals and writing with a substance that glowed in the dark. Not phosphorescence, which would have lost its glow after a while, but a continual-glowing "cold light", similar to the light given off by deep-sea creatures. The direction continued to be to the north-northwest. The men pushed their way through the forest. Soon the ground began to rise. The trees became fewer, and more widely spaced. The ground changed from forest loam to cracked rock. The slope became steeper.

Before long they cleared the timberline and were climbing amongst the rocks. The tops of the mountains loomed over them, pitch black against a dark velvet background.

The men began to use their spidersuits. It was difficult at first to master the press-then-release technique, and going was slow. After a time, though, they felt more at ease. Both men found it downright amazing to be able to scramble over steep boulders and up cliffs without the use of pitons or ropes. They felt secure, too, in a way never experienced before. The suits adhered to the rock much like a powerful magnet to a sheet of iron.

Tom spotted several hidden cameras on the way up. Thanks to the spidersuits, though, they were able to give the cameras wide berth. They continued up the sheer cliff wall until Tom's detector watch abruptly gave off a silent but noticeable buzz. "We're very close," he told Bud. As they grew near to the anti-proton source, the buzzing increased in intensity. The men pulled themselves up and over a ridge, into a sort of shallow cave in the cliff wall. Now they could hear what their watches were telling them: there was a large circular airshaft!

Rather than use any sort of flashlight, Tom and Bud used Tom's special light-amplifying lens to see the shaft. It was covered with a grate, but Tom's tool kit made short work of that. Then, carefully, the men began to climb head-first down the sides of the large airshaft. It was a good ten feet in diameter, so they had plenty of room. Before long, though, they saw a fan with a fast-spinning blade, blowing air out of the vent. "Now what?" Bud asked his friend.

Tom flashed his pal a grin. Carefully removing his tool kit, he

stuck it to the wall - it was magnetized. Then he removed several small tools. He inched his way closer to the fan. It didn't take him long to locate the pivot pins and holding bolts. The problem was the bolts were directly in line with the spinning blades. But that didn't stop Tom. Bud was amazed when Tom removed a tiny but powerful laser torch from his kit.

Adjusting the beam to almost a spider-web of thickness, Tom cut through the holding bolts on each side of the fan. Then, carefully, Tom pushed down on the blade guard a quarter turn from the holding bolts. With a slight scraping sound, the fan pivoted ninety degrees, until it was parallel with the shaft itself. Bud gave Tom a grin in return, and the two men continued down the shaft. It wasn't long before they ran into another fan. This time the work went faster. They encountered one more fan before they finally reached the bottom grill.

Carefully and quietly, Tom removed the bottom grill. Both men dropped down into a well-lit corridor. Fortunately it was deserted. But they knew it wouldn't stay that way for long. Tom removed his wrist watch detector and held it into the air. Twisting it this way and that, Tom felt the buzz increase slightly in one direction. Seeing what his friend was doing, Bud quickly removed his watch and did the same. Both watches seemed to indicate direction farther up the corridor.

They hurried up the corridor, expecting to be seen at any moment. As they passed a double-door, the watch's buzzing grew almost frantic. Tom looked up at the sign over the doors. He wasn't the least surprised to see that it said, in Kranjovian, MAIN LABORATORY. Bud started to open the door, but Tom stopped him immediately: inside, they could hear voices speaking. Both men froze. But no one seemed to notice the partly-opened door.

Then Tom noticed an oddness about the quality of the sound: it had a peculiar echo to it. Puzzled, Tom pushed the door open a little more. Then more. The lab was dark. No one was in there.

With a slightly baffled look, Tom pushed the door all the way open. He and Bud entered. In the light from the corridor, Tom found the light switches. Careful, though, he only turned one on. A few fluorescent lights flickered on in a corner. Meanwhile, the voices could still be heard.

Tom traced their source almost at once: it was another large vent opening situated at the back of the lab. As he strained to hear the voices, Bud called to him softly: "Tom! Over here!"

Tom came over to where his friend was gesticulating. He wasn't surprised to find the outer shell of the disassembled transphotonic engine. He gazed over the ruin of the engine, and noted various measuring tools and instruments. It was obvious the Brungarians and Kranjovians had been trying to figure out how it worked. But the anti-proton self-destruct mechanism had performed well: the main components of the engine had disintegrated. The radiation level was perfectly safe; the engine gave off less radiation than a phosphorescent watch.

Tom pointed his finger back at the grill. "Bud," he said, "let's try and see if we can listen in to whatever they're saying. It might be the conference Adam mentioned."

Bud gave a wry grin. "Another crawl through the ducts?"

Tom nodded. "Yes. But I doubt it'll be very far. Whoever's talking sounds pretty close."

"Lead on, Skipper!"

Tom soon had the grill removed, and they carefully climbed up on the lab bench, then into the ducts once more.

The sounds proved to be deceptive, though. Tom and Bud followed the sound through several twists and turns until they finally reached the correct grill. It was hard to see through the slanted air slots, but the voice was unmistakable: The Black Cobra!

CHAPTER 13: THE COBRA'S PLANS

" - finally see you arrived, Bronich!" Tom heard the Black Cobra snarl.

"Yes, nice of you to be so prompt," said an oily, obviously Brungarian voice. Tom and Bud exchanged looks. The Tall One! They hadn't heard much of him since the affair of the Galaxy Ghosts.

"We came as quickly as we could, Black Cobra," Tom heard a Kranjovian, presumably Bronich, reply. "You told us the meeting was set for the twenty-second!"

"And I told you," The Black Cobra replied, "that circumstances might force me to change the date on short notice. Well, those circumstances have taken place."

"What circumstances?" Bronich demanded. Tom heard sounds as though the man was removing his coat. "What is this meeting all about, Black Cobra? We gave you a weekly status report just a few days ago."

"Hmm, yes," The Black Cobra said in a slightly mocking voice. "And I see that neither you - " and here his head seemed to turn " - or you - " probably directed at the Tall One " - seems to be making much progress figuring out how Tom Swift's transphotonic engine functions."

"It is not our fault, Cobra," the Tall One replied, his voice almost a hiss, "Had we been allowed to bring our scientists to this concealed laboratory, we would have uncovered the engine's secrets by now."

Through the narrow slats of the air duct, Tom watched Bronich's eyes narrow, the man's brow become furrowed. "This is *Kranjovian soil*, Tokatyan! We will decide who is allowed to work here!"

The Tall One gave a condescending nod in Bronich's direction. "Of course, comrade. By all means, let your thumb-fingered scientists

fumble around with the probe, trying to decipher its secrets." He abruptly turned toward the Black Cobra. "And while these amateurs play their little games, I suggest, once again, that we move the probe back to our hidden laboratory in the eastern Terez providence. There, real scientists will not only be able to figure out how the engine works, but construct a far superior engine!"

The Black Cobra lit a cigarette, and stared at the two men seated at the conference table. "I see," he said in a deceptively lazy voice. "So this is what has been going on while I've been away." Without warning, he slammed his fist on the table, making both men jump. "Political bickering, when you should have been working together! Both of you are fools! Do you not know that Swift and Barclay have been missing for the better part of a week?"

The Tall One seemed shaken. "We - we thought he was buried in his lab, working on a new engine!"

"As did we!" Bronich hastened to agree.

The Black Cobra shook his head. "Unfortunately, no. The two of them have been reported as flying in and out of Washington the past few weeks. It can hardly be doubted that they are trying to find where the probe is."

"Is there a possibility of them finding it here?" The Tall One asked.

"Impossible!" Bronich shouted before the Black Cobra could reply. "It is buried under hundreds of feet of rock!"

The Black Cobra gave a slight nod. "Ordinarily, I would agree with you, Bronich. The possibility of Swift locating this hidden laboratory is remote in the extreme." In the air duct, Tom and Bud exchanged quick grins. "But where Swift is concerned, we can rule nothing out. So, I do not want the probe to be moved. Swift may have ways of scanning for it from his Outpost in Space. Instead," he turned back to the Tall One, "you are to bring your scientists here." He turned back to Bronich. "And I will brook no arguments! You've already wasted enough time as it is. I need a working model, and soon!"

For the first time, the Tall One narrowed his eyes until they became mere slits. "And what is the hurry, Cobra? Why do you wish to have faster-than-light travel so soon? Merely to beat the Swifts to it, perhaps?"

The Black Cobra met the Tall One's stare. "My reasons are my own, Tokatyan. Be grateful I came here, offering my services to both your countries. Neither one of you could have captured the probe by yourselves."

The Tall One suddenly laughed. "Grateful? You should be grateful to us, Cobra! Both of your former organizations have been smashed. You've lost twice to Swift! Even your substitution of an explosive-filled drone plane and the Swift employee you blackmailed to put the homing device in Swift's plane didn't exactly work out, did it? Your reputation as a genius has been a little tarnished of late."

To Tom's surprise, the Black Cobra did not react in anger as he expected. Instead, the Cobra gave the Tall One a slight nod. "Yes, that is true. Still, even I am not so conceited as to think myself invincible, or to believe there wouldn't be any setbacks. Swift has proven himself to be a most cunning adversary. As I believe you both have found out," he returned his stare to the Tall One, with a knowing

grin.

Tokatyan licked his lips, mentally replaying the events of the Galaxy Ghost affair. Just when they'd thought for certain that Swift and Barclay had been left to their deaths, high atop a plateau at the tip of South America, the two had not only managed to escape, but steal back the container with the "ghost" inside it, set it free, and escape once more. The crowning blow had been the appearance of the Melt Master, complete with the "Out of Order" sign on it, in the Transmittaton tank at the Capitol Building in Zarishk, Brungaria's capitol. The Tall One's superiors had not been happy with him...

Bronich remembered how the Swifts had defeated his plans to take over the Swift's iron ore mining facility in Antarctica. The repercussions from that disaster still resonated years later.

"Yes, I can see you both remember," the Black Cobra said with a grin. "Well, it would appear we all have been defeated at one time or another by the Swifts. All the more reason to work together, instead of bickering, would you not agree?"

Bronich and the Tall One looked at each other, and let out sighs. Both nodded.

"Very well," said the Black Cobra with a nod. "Let us consider the matter as settled." He turned to the Tall One. "Bring in your scientists and get them started examining the torpedo. I fully realize there's hardly anything left of the engine itself, but have them find out what they can. I will continue at the other end, spying on the Swifts. We need to know where they are. That is why I called this special meeting."

"Are they still within the United State?" Bronich asked.

The Cobra shook his head. "I don't know. They haven't been seen for several weeks. All my spies have been able to find out is that they'd been up to Washington, the CIA specifically, and working with them. On what, we don't know."

"Oh, come now, Cobra," the Tall One said. "As you just stated, they're searching for us and their probe. The question remains: in what way are they going about it?"

The Black Cobra nodded. "Correct. We must be on our guard, but far more important, we must be ready to sabotage whatever plans Swift has in mind."

"You mean, in their search for the probe?" Bronich asked.

"Yes, but not only that. It won't take long for Swift to build and launch a new probe. We must prevent that from happening," the Black Cobra insisted.

The Tall One nodded. "Indeed. When that bumbling fool Dr. Stang stole the original *Cosmotron* from the Swifts, it didn't take our young enemy long to construct a new one. No doubt he is already hard at work on a new probe."

"Which has to be stopped. I must be the first one to pierce the light barrier!" the Black Cobra declared.

"Apart from professional pride, and defeating our common enemy, why, exactly, must you be the first?" The Tall One asked, his eyes half slits once more.

"Yes, why not Kranjovia?" Bronich asked.

"Or Brungaria?"

The Black Cobra stared back at them both, equally hard. "There are several reasons, none of which you need to know just yet. If

you're worried about national pride, rest assured that my crew will consist of both Brungarians and Kranjovians. Each of your nations will be represented. But I must be the first one beyond the solar system."

Once again, Bronich and the Tall One exchanged glances. They were both suspicious of the Cobra and his reasons for wishing to be the first interstellar traveler. But they kept their suspicions to themselves.

In the air duct, Tom and Bud were also puzzled. It sounded to Tom as if there was more than just the need to beat Tom Swift to the stars. He needed to find out more. But if the Black Cobra wasn't going to open up to The Tall One or Bronich, he wondered how he was going to find out.

CHAPTER 14: THE FOREST ENCOUNTER

Back in their small room, the men discussed what they had learned so far. They had located the probe, the Cobra's hidden lab, and now had a fairly good idea of the Cobra's plans. Still unknown was what the Cobra had in store for them and the second probe Tom had under construction. During the lull in the conversation, Tom mulled things over.

"You know something, Bud?" he asked his friend.

"What, Skipper?"

"Maybe it's about time I stopped worrying about what the Cobra has planned for us, and start doing something about his plans!"

"You mean ... sabotage?" Bud asked with more than a hint of excitement in his voice.

Tom nodded. "Exactly! But we'll have to do it in such a manner that it appears natural, or just plain fumbling on the part of their workers."

"I think we can do that," said Bud with a grin.

"In addition to that, I'd still like to find out just what the Black Cobra is up to," Tom stated.

"Sure, but how?"

Tom shook his head. "I'm not certain yet. But if the Black Cobra has private quarters somewhere - and I'm sure he does - I've like to investigate them."

"I doubt it will be that easy, Skipper," Bud warned him. "He's hardly the one to leave his quarters unguarded in some way."

"I'm well aware of that," Tom replied soberly. "I'll just have to come up with a way around any potential alarms or traps."

"What about alerting John Thurston at the CIA?" asked Bud.

"I'll do that in the morning," Tom told him. "The weather

satellite the CIA is using for a relay station won't be over the horizon until then."

"Okay. What now?"

"Now we make some tentative plans on sabotaging their work. We won't be able to do very much until we know our way around the hidden lab complex better, and find out what materials are on hand," Tom replied. "So, for now, let's get some sleep. We're going to be up early in the morning."

"That's right!" Bud exclaimed, snapping his fingers. "We still have to maintain our cover story!"

Tom nodded. "Yes, we need to sell our firewood, and take on more. We're going to have to drive some hard bargains, so we'll have an excuse for staying around here longer."

The next morning, the men made their way to the town's market. There they sold their firewood directly from the wagon. In spite of their high prices, they had some eager buyers. "It almost makes you want to go into business here," Tom muttered to Bud. By midday, their stock of wood was considerably reduced. But there was still enough leftover for them to stay another night.

Before they had gone in to town, Tom pretended to work on the wagon. It was kept in the stable close to their horses. Actually, he was sending a message via the Private Ear. Though the Private Ear was able to receive as well as send, Tom decided to restrict the radio to just send only. He wasn't too certain just what sort of equipment the Black Cobra had for monitoring possible spy radios, but he knew he'd better not take any chances. Receiving a message might pinpoint where he was. The signal was sent up to a disguised weather satellite, and relayed from there to his Outpost, and then sent down to the CIA headquarters in Virginia.

Tom wished he could receive advice from John Thurston or his father. It would be interesting to know their thoughts on the Cobra's plans. Chances are, though, they wouldn't be able to give him much advice that would be any different than what he'd thought of himself. He soon rejoined Bud, and they started into town to sell the wood. At one point there was a brief scare, as a car with Bronich and another Kranjovian drove through town. But neither of the two paid Tom or Bud the slightest attention. The long day dragged on, until around six o'clock Tom decided to call it a day. Many of the other street merchants were doing the same.

The men had another brief meal in the tavern, and once again pretended to get drunk. Before long they had disappeared into the woods once more. It took them very little time to regain the air vent, and soon they made their way back to the meeting room. The room, however, was dark. "We're either too early," Tom stated, "or there's no meeting here tonight."

Bud nodded. "Guess not. So, what do we do now?"

"Let's make our way to the other labs. I need to know just how far they've gone."

As quietly as they could, the men crept through the air vents, which continued to remain fairly large. Occasionally they ran into the large fans, but Tom was able to rotate the fans on their horizontal axis, allowing safe passage. Before long, they reached many of the main labs.

Tom sat patiently before the grills, soaking in as much of the

conversations as he could. Bud had to keep still as best he could. Though he was able to understand the language, the terms - all scientific - meant little to him. Occasionally he'd turn to his friend and begin to ask what they were talking about, but Tom would quietly hush him.

After a while Tom motioned to Bud, and they moved on to another grill. There Tom repeated his eavesdropping. Then he'd move on to yet another grill. This went on for hours. At times, Bud almost dozed off. But Tom remained as alert as ever. Finally, with a grin, he shook his friend awake, and they moved back along their route, until they reached another vertical shaft. Tom motioned for them to climb. When they reached the top of the shaft, they found a ninety-degree bend. They followed this a little ways and reached another exit from the lab. Tom removed the grill and they stepped out into the mountain air. Far off in the east, the sky was beginning to turn a faint pink color.

"Dawn's not far off," Bud remarked. "Did you hear all you needed to, Skipper?"

Tom nodded. "Definitely, Bud. I'm afraid it's a good news/bad news situation."

"Okay," Bud said with a wry grin. "Let's start off with the bad news."

"Sorry," Tom replied, "I'm going to have to start off with the good news: the Black Cobra's scientists can not figure out how the transphotonic engine works. Seems my booby trap worked pretty good."

"That's great, Tom!" Bud exclaimed. "So what's the bad news?"

"He's building a faster-than-light drive anyway."

"He's what?" Bud asked, startled. "But how?"

"That's what I'd like to know - and, it seems, what both the Brungarian and Kranjovian scientists want to know as well. The Black Cobra seems to be giving information, both mathematical and schematics, to the scientists and engineers. But it comes in small amounts, with the occasional bursts. From what I can understand, it wasn't like the anti-matter field he surrounded Little Luna with. That device was designed and built with a team of scientists and engineers. This info seems to be coming from the Cobra himself. And that it comes in such a strange way is making the others suspicious - as though someone else is instructing him, but only in small amounts."

"But Tom, who - other than yourself - could possibly tell him how to build a faster-than-light drive?"

Tom nodded. "I have my suspicions, Bud. And if what I suspect is correct ... but I have to be sure. We've got to come back tonight. I have to find the Cobra's private quarters. It's become more important than ever."

But that day, the men sold the last of the wood. They had no choice but to leave the small town and make their way back towards Brungaria to secure some more. To do anything else would raise too many suspicions.

It was a nail-biting time for Tom. He was eager - almost desperately so - to get back to the Cobra's lab and confirm his suspicions. But they had to maintain their cover as simple traders. This time it was harder. They had to remain separate from other traders, who obviously wouldn't recognize them. But their own stand-offishness itself caused suspicious glances in their direction.

Further, other wood traders were becoming bitter towards them. Tom and Bud soon learned there was a fierce competition between traders of the same merchandise. Tom dared not sell too low, for fear of angering the other wood traders. But selling too high would make it bad for all of them as well. It was a far cry from science and engineering! But Tom learned the basics of the business fast, and it almost became a game for him. He knew better than to win too often. When it became clear to the other wood dealers that Tom wasn't any better than they were, most of them left Tom and Bud alone. Most of them...

On the road back to the southern Brungarian border, Tom, who had been deep in thought over what had transpired at the lab in his absence, cried out when a blinding beam of sunlight hit him in the eyes. Bud cried out as well, and the horses shied. Moments later, lariats snared the men. Both were pulled out of the wagon to either side. Men raced out of the woods and grabbed the horses. Bud and Tom were quickly tied up and marched into the woods.

They went up a slope for a ways and were lashed against some tree trunks. Tom asked several times who the men were and what they wanted. One of them slugged Tom in the jaw and told him to be silent. Blood dripping from his jaw, Tom did so, with a glare at the man who hit him.

After a short wait, the leader soon arrived. He didn't waste any time. "Who are you?" he asked them in a thick Brungarian accent. "You are not from around here. I know every trader in both of these countries. My father, grandfather, and great-grandfather were traders along these routes, long before the exiled Russians or the Germans ever seized power and changed all the borders. Now, out of the blue, you two show up. So again I ask," and the man pulled out a sharp knife and held the tip a millimeter from Tom's eye, "who are you, and why are you here?"

Tom thought fast. There was no way of knowing the man's allegiance to the government, though he didn't sound very enthused about them. Telling the whole truth was not necessarily an option - at least, not yet. And the man looked as though he could catch any sort of lie easily enough. The only way to go was to be as minimalist as possible.

"We're not here to compete with you," Tom answered slowly. "We will soon be gone from here, and not trouble you again."

Several of the men laughed at that. "Oh, I do not think you will trouble us very much," the leader replied, his knife still very close to Tom's eye. Tom fought hard for his eye not to water. "I could easily kill you two and seize your wood, add it to ours. This happens a lot among traders, as I'm sure you would have known had you actually been one. But you are imposters, it is obvious to see. Spies for the government, quite possibly, though why the government should start spying on us all of a sudden I do not know. Or," the man mused, "it's altogether possible that you are spies from another country! America? The British? The Germans?"

Tom refused to either confirm or deny. He kept silent.

Abruptly, the man withdrew the knife. "No," he said, "I do not think that if I cut out your eye you would talk. Nor if I even hurt your friend here. Spies are too well trained to give in to torture. However," the man went on, "there are other means by which to loosen a

man's tongue!" He turned back to his men. "Begin building a fire, and bring out the deer meat. This may take some time, but by tomorrow morning, we should have all the answers we want!"

Before long the men had a good-sized fire going. They planted metal poles in the ground, brought out skewers and large greasy chunks of meat. Expertly stabbing the meat, they placed the skewers on the poles and began to turn them. Every so often, they basted the meat in a sauce, then sprinkled on spices - especially salt. It wasn't long before the savory smell began to affect Tom and Bud's stomachs. The traders laughed as they heard the growling. Tom and Bud exchanged glances. They remembered all too well another time down in South America where the Brungarians had treated them much the same way.

As if reading their minds, the leader approached the two. "Ah, I see you are beginning to feel hungry!" He turned back to his men. "They would like to eat!" Once again the men laughed. The leader turned back to them once again. "Well, let it not be said that we are barbarians! We will give you plenty to eat. And something to wash it down with."

At first Tom thought the man was merely saying this to torment them further. To his surprise, the leader had his men cut off strips of meat and take it up to Tom and Bud. Since they were still tied up, they had to open their mouths wide and allow the men to stick the meat in. But the men gave them plenty of time to chew and swallow. When they began to get thirsty, the leader let them have swallows from a rather potent Brungarian wine. Tom was becoming puzzled by this seeming good treatment. There had to be a reason behind it. Before long, though, his head was swimming from all the wine. He cursed himself for drinking so much, and hoped he wouldn't give away any secrets. That was about his last thought. Soon all went dark.

CHAPTER 15: SABOTAGE!

When Tom woke up, his head was still spinning, and his stomach felt like a metal forge. It was all he could do to keep last night's supper down. But the nausea and the headache were as nothing compared to a terrible, overwhelming thirst.

As he lifted his head, he noticed that his position had changed. He was no longer tied to the tree with Bud. Both he and Bud were chained to what appeared to be a crude picnic table. On the table near the edge opposite them was a pitcher of ice water and two glasses, both full of water. Before he knew what he was doing, Tom lunged for the glass of water nearest to him. But the chain pulled

him up short, his fingers barely an inch away from the glass. Tom lunged towards the glass near Bud. But it was even further away. Then he tried to shift the table. But it had been anchored to the ground in some manner.

For the first time, Tom began to see the sheer fiendishness of the leader's plan. They'd deliberately been fed salted deer meat, along with a wine that, far from slaking their thirst, only made it worse. Now they were chained to a table with water in sight - but out of reach. And if that wasn't enough...

Tom's brain finally registered what his ears had been hearing all along: not ten feet from the table, a small mountain brook burred musically, its stream of cool, clear water also well within sight. The Tall One himself, thought Tom, could hardly have devised a more sadistic torture.

Bud finally lifted his head up. Like Tom, he could barely swallow his own tongue. "Tom...?" he croaked out.

"Right here," Tom croaked back in turn.

"Water!" Bud cried out at the sight of the glasses.

"Forget it, Bud," Tom rasped out. "I tried. You can't reach them."

Bud tried anyway, also in vain.

Time dragged as the sun continued to rise in the sky. Tom tried desperately to think of a way out. But the thought of water continued to cloud his mind. Before long, the leader walked up to the table.

"Good morning my friends," he said with a smile. "Sleep well, I trust? No more hunger pains?" Both men just glared at him. He chuckled. "Very good. Well. I do not know about either of you, but I myself am rather thirsty." He produced a collapsible cup from his pocket, removed the lid and shook it in to shape. He poured some water from the pitcher and drank it in front of them, smacking his lips. "Ah, it is very good! Perhaps you would like some yourselves?" His eyes all but twinkled. "And it is so simple to obtain what you crave. Just tell me where you are from, who sent you, and your purpose here, and I promise you all the water you could wish for. It is all very easy." He paused and looked at the men. Neither said a word or twitched a muscle. The leader laughed quietly and lifted his cup in salute to their determination. He emptied his cup, then collapsed it and put it away. "Then I shall leave you for a while. When I come back, perhaps you will be in a more obliging mood. Please keep in mind that while you are high in the mountains, it still gets very hot up here this time of year. In the meantime, enjoy the sight of the trees and the pleasant brook. Is very nice to listen to, is it not?" With a laugh he strode back towards his camp.

When he was out of earshot, Bud turned to Tom and said, "Tom! Isn't there anything you can do? I swear I'm about ready to start sucking on the wood of this table for some moisture!"

Tom gave Bud a grim smile. "I don't know, Bud. Foolishly, I left my small tool kit back in the wagon, never figuring we'd need it on the road back - and since we were getting close to the border, I didn't want any of the border guards to run across it accidentally. Man, was that a mistake! Still..." His voice trailed off as he forced himself to think. The craving for water was indescribable - far worse than the time he'd been stranded in the Caribbean trying to keep afloat, with Bud in control of his jetmarine the *Sea Dart*, and

waves kept slapping his face, forcing him to drink seawater. Tom shoved that memory out of his mind. But part of it wouldn't go away. Seawater! What was it about seawater? And something to do with one of his inventions ... repelatrons! Of course! Tom sat up suddenly, remembering the microrepelatrons both men had hidden on them.

"Tom?" Bud asked, sensing his friend had come up with an idea. But Tom motioned him to be silent. He needed to think this through.

The microrepelatrons were designed as weapons, not tools. They wouldn't saw or cut through the chains, or drag the water over to them. Still, Tom knew he could use them in some way. But how? If only he had the fountain pens with their durastress filaments. But they'd been left with the wagon as well, to be worn only during their time in the secret lab. Once again, Tom hadn't wanted for the fountain pens to be confiscated at the border. The microrepelatrons were built into the locator watches, which the leader had failed to remove.

Tom removed his watch and looked at it. He couldn't fiddle with it without his tool kit. The watch still had its targeting laser and other small controls. He looked at the table. Then it hit him what to do. This won't set us free, he thought, but it'll sure help with the thirst problem!

"Hold on, Bud!" he exclaimed. "We're about to get a drink!"

As Bud looked on in wonder, Tom adjusted the repelatron beam to a wide spread. He reached under the table, as close to center of the table as he could. Then he slid the watch towards the far end where the water was located. Next, he activated the repelatron, keeping the beam pointed at the ground and the opposite side against the bottom of the table.

Tom kept the power down as low as possible. Gently one side of the watch touched the bottom of the table. Making sure it held steady, Tom slowly increase the power, inwardly relieved that he'd made the watch from strong materials. It would have been crushed otherwise. Nothing happened for a few moments. Then, with a small jerk, the end of the table began to tilt upwards.

Tom let the table rise, watching the glasses of water and the pitcher. Slowly, the glasses and pitcher began sliding down towards the middle of the table. When they were close enough, he gently reversed the power, causing the table to settle with a slight bump.

Bud waited no further. He grabbed the glass of water at once and began gulping it down. Tom wanted to do the same, but cried out, "Wait Bud! Not so fast! You'll make yourself sick!"

Still gulping, Bud had to force himself to push the glass away from his lips. At once, nausea set in. Bud squeezed his eyes shut and fought against vomiting with every fiber of his being. After a bit, though, the queasiness passed, leaving his sweating and gasping for breath.

"I'm - I'm okay, Tom," he said. "You're right. Shouldn't have drunk so much so fast. Still, I swear to you nothing on earth tasted as good as that water!"

Tom nodded with a grin. Then he, too, began to drink. But Tom drank carefully, in sips. He also rinsed his mouth out with the water. After a short time, his stomach grew accustomed to the liquid, and his drinks became deeper, until he finished his glass. He used to pitcher to refill his and Bud's glasses. Both men drank deep this

time. Before long, the pitcher was empty.

Now that his mouth didn't feel like the Sahara Desert, Tom's brain began to kick into high gear. He examined the chain to see what held it in place. As he suspected, it was connected to a peg pounded deep into the ground. However, the length of each chain link was just wide enough for his to insert the watch. Pointing the microrepelatron at a slight angle, he activated it, waited for the chain to pull taut, then increased the power. With a crackling noise, the peg pulled away from the ground. Tom was free. He quickly hurried over to Bud's side of the table and repeated the procedure. Wrapping the chains around their arms, both men hurried back through the forest. They were careful to give wide berth to the leader's camp. Before long they found themselves back at the road. There was no sign of their wagon or horses, though.

"No worries there," Tom told his friend with a chuckle. Once again he fiddled with the controls on his watch. The day and date indicators at once began indicate direction and distance.

"Smart move, Skipper, planting a homing beacon on the wagon," Bud remarked.

"Knew it would come in handy," Tom answered with a smile.

The two men set off at once. It didn't take them long. Nor were they surprised to find the wagon close to the leader's camp. No one was guarding it. Why should they? As far as the leader knew, his captives were still captive. But Tom knew that wouldn't last for long. The leader would soon visit the men and find his prisoners had escaped.

Tom quietly approached the horses. Stroking their noses, he began to lead the horses and the wagon back to the road. Of course, the whole operation could hardly be accomplished without some noise. As the road gradually came into view, shouts of alarm and amazement were heard behind them.

"Bud, take care of any pursuit," Tom ordered his friend. "I'll prepare our little surprise."

Bud nodded, and began setting the microrepelatron on his watch. Several of the leader's men raced out from behind the trees, carrying rifles. They began opening fire.

Bud set his microrepelatron on wide spread. Bullets veered off left and right. Then Bud narrowed the beam and fired back at the men. It was hard to aim at first, but he quickly got the hang of it. The men firing their guns were abruptly knocked backwards. Several were lifted off the ground and hurled back several yards. The other men stopped firing, and were looking at their comrades in amazement. Then they, too, went flying. Bud didn't limit his aim to just the men. He fired at the tree's lower branches, causing them to be ripped from the trunks and thrown right into the men's faces. Aiming at the ground, Bud did the same thing, throwing dust, dirt, and pine needles straight at the men.

By now, Tom had regained the road. "All right, Bud, that's enough!" he cried out. "Let me take it from here."

"Okay, Skipper, but I almost hate to! That was fun!"

Tom grinned, then pressed a concealed button under the wagon's seat. A slim column of steel emerged from the floorboard. Two control panel wings swung up and locked into place. Tom pressed several buttons. At once, a faint humming sound was heard. The wagon

and the horses lifted from the ground.

The horses whinnied in fear, but Tom talked to them gently, soothing them down. Bud looked back behind the stacks of wood. The leader and his men had just arrived at the edge of the road, and were looking left and right, their faces wreathed with astonishment. *It must have looked to them as if we'd simply vanished*, he thought with a chuckle. Bud didn't realize that the leader caught a glimpse of the flying wagon just before it vanished over the tops of the trees...

Once they were out of danger, Tom wasted no time setting the wagon back on the road once more. He deactivated the control panel, letting it conceal itself once more. The horses let out snorts of relief.

"Well, I guess I should be grateful we're near the border again," Tom muttered, half to himself. "But I hate to think of all the progress the Black Cobra has made since we were there."

"We're still going sabotage his spaceship, aren't we?" Bud asked.

Tom nodded. "Yes, and we're going to have to move fast. It won't be long before the Black Cobra finds out we're not in the U.S., and hardly takes a genius to figure out we came to Brungaria. And now word of two fake wood traders is going to be spreading all over both countries. Our time is going to be limited."

The border crossing was as uneventful as the first time. The guards performed their searches and interrogations, received their bribes, and waved the wagon on through. Two days later the men were back in Quito. They checked in at the same inn, ending up in practically the same rooms. Tom and Bud killed time down in the cavern, impatient to be on their way but careful not to show it. Finally they retired for the night. They were out the window and on their way before a minute had passed.

They reached the other air vent without any trouble. There were still no signs of guards having been posted outside. Given the Cobra's worries about Tom and Bud searching for their lab, Tom wondered about that. But it was no time to worry about it. They made their way down the vent shaft, moving the fans out of the way. Once again they looked out the vent covers at the Cobra's labs.

In one lab, machines hummed and sparks flew from welding torches. In another, men wrote on chalkboards and discussed the equations or diagrams written there. In other labs, liquids bubbled and raced through glass tubing as experiments were performed. The men soon found a factory floor where forklifts and dollies were moving boxes of equipment this way and that. Finally, in a sub-basement, they found the object of all the work: a large spaceship!

Both men noted that it was similar to the Cobra's first space ship that was used to overthrow Nestria. Only this one was even larger. As they watched, missiles were being loaded into projecting tubes. The tubes then folded flush with the sides of the ship.

"This is it, Bud," Tom said in a whisper. "This is where we'll begin our counterattack!"

Bud looked at Tom, astonished. "But how, Tom? I doubt if we can put on uniforms and blend right in. Even with our altered looks, everyone must know everyone else by now."

Tom nodded. "Yes. But I don't plan for us to try anything by ourselves. Instead, we're going to let them do most of the work for us!"

Bud raised an eyebrow. "Sounds like you've got another rabbit ready to be pulled out of your hat, Skipper! What have you got in mind?"

Tom explained his plan. By the time he finished, Bud was grinning wickedly. "Yeah. That should do it all right."

CHAPTER 16: THE CURIOUS CRYSTALS

Nighttime came to the Black Cobra's compound. Once again, Tom and Bud were in the air vents. They'd returned to town before dawn, caught a few hours sleep, sold some more firewood, bought some more necessities, ate, slept a bit more, then crept back to the secret lab.

Tom knew that the Black Cobra had a night shift of scientists and workers. What he and Bud had to do was to make some alterations prior to the night shift's arrival. There was only a one hour interval between the shifts when the labs were closed and locked.

The two men worked separately. Using a soldering iron and sometimes a welding torch, Bud made minor alterations to various circuit boards and heavy machinery. He concentrated on the ship's weapons system at first, transposing diodes and capacitors, resistors and transistors. Bud was not an electronics engineer, but he'd been around Tom long enough to use the tools with competence. In addition to the electronics, he made minute changes to missile tubes and energy weapons' heat sinks. With the heavier machines, he altered cams and gears, belts and chains. All of them would work well - for a while.

Tom's work was much more demanding: he carefully erased equations written on the chalkboards, and wrote new ones in their place. It was painstaking work because he had to make the printing look the same. He also used the drafting machines to sketch minute design changes, and have them converted to blueprints. The original blueprints he removed and hid in his shirt. He'd also visit the chemical labs and make changes to the fuel and oxygen mixes. All of this took time, which they didn't have a lot of. In the town, people were starting to become suspicious about their hanging around so often. But Tom knew he had to stay until the job was finished.

After the night shift had started, Tom and Bud rested in the air shafts. Tom used a special device, based on his Sonic Boom Trap, the cancelled any snoring they might make when they fell asleep. Not that they could rest very well on the air vent ridges. Then, during the hour between the day shift and the night shift, they went to work once more.

Tom, especially, kept searching for the Black Cobra's office. Three days later he found it.

A small, L-shaped airshaft led to it. Tom had to squeeze himself through the narrow shaft, which was barely over a yard in diameter.

One meter, he thought to himself. Orienting himself horizontally once more, he became aware of an almost overpowering odor, at once familiar: reptile. Clicking on his light, he pulled up short. In front of him was a wire grill. And beyond it - snakes. Specifically, cobras!

Beyond the snakes, Tom could make out a large, oak-paneled room. He caught a glimpse of a curious-looking computer terminal, but the snakes, the wire grill and the grill cover itself blocked any further attempts to see it clearly.

The snakes, sensing his presence, began to slither toward the wire grill, their hoods expanding, tongues tasting the air. Tom moved back cautiously, lest some of them be venom-spitters. How was he going to get past the snakes and into the Cobra's office? He had no doubts that this was the place. Why else the snakes in the airshaft? Pondering the problem, he realized he had the solution with him all along: his repelatron wrist watch!

Tom carefully adjusted the beam to a wide spread, shoving the hissing snakes away from the grill. The cobras, baffled and furious at the strange force pushing them back, reared and hissed, lashing their bodies, but otherwise unable to cause any trouble. Tom attached his watch to the grill as best he could, then removed his tool kit. Now was the time to use his newest tool: a pocket beamer based on his energy projector. He and Bud had used them once on the moon, when they thought they were firing at snakes of some sort. The weapon emitted a continuous jet of energy. The beamer was more refined, however. Unlike a laser, Tom's beamer tool could control the length of its projection. Tom adjusted the tiny controls until the beam was hardly more than an inch long. It cut easily through the wire mesh, far more efficiently than even an oxyaceltene torch. Tom had to keep an eye on the watch while he did so, it kept threatening to fall off. About a minute later the grill was cut through.

Now came the tricky part. Tom had to get by the cobras, remove the air vent, climb into the room, and put the air vent back into place. Without getting bit. He wasn't worried about the snakes escaping back into the main airshafts: the L-shaped passageway would prevent that. Tom fiddled with the controls to his watch. Adjusting the dispersion angle, he began shove the snakes off to the side, so that they were no longer pressed against the air vent. Tom kept the wire grill close to him as well. All of this took time. The snakes continued to hiss and rear at him. They moved with the greatest of reluctance. Tom was sweating, fearful that at any minute the Black Cobra could come into his office for something. Finally, though, the snakes were now behind him in the airshaft. Leaving the grill propped clumsily against its own cut wires, and the repelatron watch still holding off the snakes, Tom turned to the air vent. It was like the others, and he quickly removed it. In one quick movement, Tom dropped to the floor outside the shaft, grabbed the watch and shut it off, then returned the air shaft to its original place and bolted it back in. He was just in time: a cobra made a darting motion at him, causing him to violently back away from the grill. Tom almost backed into the computer table.

Regaining his breath, he turned back to the computer. It was, indeed, very different from any other computers he'd seen before. The keyboard contained many extra keys, and was made of a lightweight

material. Tom's first guess was plastic, but it was much different from any kind of plastic, even Durastress. The monitor was surprisingly flat, and shaped like a rectangular pentagon. It was stretched along its horizontal axis, and about an inch deep. To one side lay a strange-looking glove, similar to a ski glove. But there were wires attached to it, connecting the glove to the monitor. And the index finger had small ball attached to it.

Unable to contain his curiosity, Tom looked around for a way to turn the computer terminal on. He finally found an on-off switch on the back of the monitor. He flicked it on.

At once the monitor came to life. Tom was somewhat surprised to see it was in color. Only recently at Enterprises were they beginning to use color monitors. The display was extraordinarily sharp. No signs of fuzziness that a lot of computer monitors had. *As sharp as one of my Magic Mirrors*, Tom thought.

The screen showed a lot of small pictures, all of them tiny folders. None of them were named. Tom touched the keyboard a few times, but was unable to find a way to manipulate the small folders. That they were representations of computer files could hardly be doubted, though he'd never seen them displayed like this. He glanced down at the glove. *It must have something to do with this*, he thought. He picked it up placed it over his hand. Apart from the resistance of the wires he had to drag around, it didn't feel any different. Not until he moved it in front of the monitor did he notice anything.

A small "+" appeared on the screen. And it moved around! Tom quickly realized that whenever he moved the glove, the "+" moved as well. He wiggled the fingers around and found out that it was the index finger with the ball on the end that actually controlled the odd symbol. Up, down. Left, right. And even in circles. The symbol obeyed all two-dimensional movements of the pointing finger. *Similar to my Magic Mirror's Rotator*, Tom thought.

Tom moved the symbol onto one of the small folders. Nothing happened. He darted it around to other the other folders. Still nothing. Tom drummed the fingers of his left hand on the desk, pondering. There had to be a connection between the folder pictures and the moving symbol. Then an idea occurred to him. He moved the symbol back to the folders. Aiming his finger at the folder, he jabbed it inward. And was rewarded with a response.

But the response disappointed him: a white box with red letters appeared. It read: **UNABLE TO OPEN. INSERT CRYSTAL.**

"What crystal?" he muttered to himself. And what, he wondered, did it even *mean* by a crystal? A crystal diode?

Tom stood up and looked around the office. There were several cupboards overhead. He began to open them. In some he found nothing but coffee, cups, and sweeteners. "At least I now know how you take your coffee, Black Cobra," Tom muttered wryly. Most of the others were locked. Tom tried the drawers of the desk the computer was on. They, too, were locked. Should he try to jimmy them? He had wanted to be able to leave here without the Black Cobra ever knowing they'd been there. But that was starting to look increasingly difficult. Tom knew he couldn't go back the way he came. He'd have to leave this office and enter another, hoping it would be empty. Their sabotage

efforts were almost finished, but Tom was fairly certain it would take another couple of nights before the efforts would be complete. Then they would leave Kranjovia altogether, and be picked up in Yugoslavia. But if he broke the locks, it would be a dead giveaway that someone was in the secret lab. And it wouldn't be hard to guess just where.

For long moments Tom sat in the chair, gripped by indecision. Then he shrugged. The action to take was, in the end, obvious: he had to know how the Black Cobra had learned to build a faster-than-light drive. That outweighed any further damage he could inflict on the Cobra's new spaceship.

Tom removed his cutting tool once more. Adjusting the thickness of the beam to a spiderweb-thin ray about a half-inch long, he cut through the desk drawer locks with ease. But there was nothing of interest in them except some papers covered with equations. Tom recognized the equations as mostly to do with inertia constants and acceleration. But, there were a few that hinted at possible quantum changes during high gravitational compression. A few other equations had curious feedback variables. For what purpose, Tom wasn't certain. He memorized them as best he could and continued to explore.

In the locked overhead cabinets he hit pay dirt. Inside one of them, a small wooden box with a handle on the lid was opened. Inside were at least a dozen dice-sized cubes of pure crystal. Tom removed one and examined it. The interior of the cube wasn't transparent, but fuzzy, as though the crystal held mist encased inside it. Looking back at the computer, Tom paid attention to the curious device on the other side of the monitor. He'd noticed it before, but hadn't really thought about it. Now the device's purpose seemed obvious. It was made of black plastic, cylindrical shaped with a spread-out base. The top was open, exposing a cube-shaped holder. The lid also held a cube-shaped holder. Obviously, the lid was meant to close on the cube and hold it in place. Not knowing which end of the cube was supposed to go in, he inserted it and closed the lid. He jabbed at the folder once again with the glove's finger.

**FILES NOT FOUND. MAKE CERTAIN THE PROPER DATA
CRYSTAL IS IN PLACE.**

the computer responded. Tom was about to remove the cube and insert another, when he decided to try another folder first. He received the same response. Tom kept jabbing folders until he reached the third folder on the fourth row. At once the picture of the folder opened theatrically, and the screen changed to show a list of files:

1. PHASE IX:

- A. TEKILI - LI SPACEPORT CONTROL**
- B. THE SEARCH FOR FORMER TEKILI - LI
CONQUERED WORLDS**
- C. THE PRETENSE OF MUTUAL AGENDAS**

2. PHASE XX:

- A. TEKILI - LI WEAPONS RESEARCH**
- B. MINERAL ORES ON SISSANICK - COMPARED
TO EARTH'S.**
- C. DEVELOPMENT OF SOLAR EXPANSION DEVICE.**

- D. PRELIMINARY PLANS FOR TOTAL CONQUEST OF SWIFT'S SPACE FRIENDS (VASHANTI)
- E. PRELIMINARY PLANS FOR TOTAL CONQUEST OF THE TEKILI - LI

3. PHASE XI:

- A. DEPLOYMENT OF SOLAR EXPANSION DEVICE
- B. STOCKPILING OF SURVIVAL RESOURCES
- C. UNITING THE REMAINS OF EARTH UNDER BRUNGARIAN BANNER - COMMON THREAT
- D. SETTING UP WORLD GOVERNMENT IN ANTARCTICA

And so on.

Tom was astonished to find his space friend's true name. Vashanti? He remembered all the trouble he and his father had long ago, when contact between the two races was tenuous at best. They spent one night struggling with equations and ended up with two very different physical descriptions! His space friends had given them their true name on occasion, but they'd never been able to translate the mathematical symbols. So how had the Black Cobra managed it? And who - or what - was the Tekili-li? Why did the name ring a bell from somewhere?

Curious as to how to bring up more information, Tom let the glove's index finger move down the list. As it did so, the letters all changed color. Which meant what? Then it hit Tom that he was selecting each subfile. Eagerly, he jabbed his finger at the computer screen. At once a file came up with the subfile's heading.

Now that he'd mastered the workings of the strange computer and its glove, Tom wasted no time searching through all of the folders, files, and subfiles. Many he wasn't able to get into: the contents required a password. Tom knew that he could probably figure it out if he'd had more time. But that wasn't something he had a lot of. He was also disappointed not to be able to find out more about his space friends.

Tom was so caught up searching through files he didn't pay any attention to the sound of footsteps outside the office. The key in the door, however, alerted him. Before he could make any moves to shut off the computer, the door opened. The Black Cobra stood there staring at Tom Swift in dumbfounded astonishment.

CHAPTER 18: QUESTIONED BY THE BLACK COBRA

The Black Cobra's astonishment vanished in an instant. "Well, Tom Swift!" he said in a mock-genial voice. "It's been too long.

Please, make yourself right at home!"

Tom froze, uncertain what course of action to take. He could use his microrepelatron on the Cobra, or just charge him. He might be able to make it to another room and get back in the air ducts. But the element of surprise was gone. It wouldn't take the Black Cobra long to realize they'd been using the air ducts to get around. He'd close them up and flood them with gas.

On the other hand, if he voluntarily surrendered, he might be able to find out some things from the Black Cobra. Or the Brungarians and Kranjovians, depending on who would be questioning him. There was also a good chance he could play one against the other.

With a shrug, Tom replied, "Don't mine if I do." He turned back to the computer. "Quite a computer you've got here. Your own invention?"

The Black Cobra paused. "Yes, you could say that," he replied, his voice oddly strained. He removed a concealed gun. Tom noted that it was of Brungarian manufacture. "Now, let's go to a room that's more suited to chatting, shall we?" He motioned with the gun.

Tom followed docilely, his eyes taking in every door and corridor. They stepped into an elevator and went down four floors. Upon exiting, they continued through several more corridors, stopping in front of an ordinary door. Tom noted with interest that the door did not use a regular key, but numbers punched into a keypad. There was a click and the door swung open. The Black Cobra gestured with the gun, and Tom went on inside.

When the Black Cobra turned on the lights, Tom saw that the room was mostly empty, save for some cabinets and a large chair in the center. The chair, naturally, had arm and leg restrainers. Both were currently open. "Take a seat, Swift," the Cobra commanded.

Tom did so. The Black Cobra walked behind the chair and pushed a button. The restrainers closed and locked. The Black Cobra walked over to a phone on the wall and picked up the receiver. He punched a button and spoke. Though he spoke low, Tom overheard enough to realize he was asking for Brungarian and Kranjovian interrogators to come and help him. Perfect. Just as Tom had hoped.

Tom was even more inwardly delighted when one of the interrogators turned out to be The Tall One himself. The other was an unknown Kranjovian.

The Tall One flashed Tom a wicked grin. "Well, finally I have Tom Swift in my clutches once again! Rest assured, I won't treat you as nice as I did before!" Tom winced inwardly at that. The last time they had met, the Tall One had abandoned Tom and Bud on a high hill in the Tierra del Fuego plateau, tied up, bait for circling vultures. But Tom also knew that the Tall One had been in disgrace following their escape and the release of the captured Galaxy Ghost. No doubt he was eager to settle that score.

"Now, now," the Black Cobra pretended to admonish, "let's not be too eager. Take your time with him. We don't want this over too quickly."

The Tall One shot the Black Cobra an annoyed glance. "Do not tell me how to interrogate my prisoner, Cobra. I have been doing this for many years. And where is Swift's friend Barclay, might I ask?"

"I am attending to him," the Black Cobra answered curtly, equally annoyed. "He will soon be captured. He does not have the mental

facilities his friend her does."

Tom seethed at this insult to Bud, even though he knew it was to the good: let them underestimate Bud at their own peril.

The Tall One grunted. "Good. See to it, then, and let us alone. We will soon have all the answers you desire."

The Black Cobra's eyes narrowed. "Do not think to dictate to me, Tokatyan. I am the leader of this whole operation. Do not forget that!" He whirled around, his jet of black hair flying as he left the room.

"Well, Tokatyan, I see you've become quite the lap-dog," Tom said with a smile.

The Tall One turned his head back to Tom with a snap. He slapped Tom across the face, hard. "Don't be deceived, Swift. The Black Cobra might look as though he's in charge, but it's Brungaria who calls the shots!"

"Of course," Tom replied, turning his head slightly and giving the Kranjovian interrogator a quick wink. "My apologies."

The Kranjovian interrogator froze in what he was doing. He stared at Tom, then turned to the Tall One. In a deceptively quiet voice, he said, "I believe you mean it's *Kranjovia* that runs this operation, Tokatyan!"

The Tall One turned back to his comrade. "Do I? How thoughtless of me." His tone of voice clearly indicated otherwise.

"Yes, thinking doesn't really suit you very well, does it?" Tom asked with a sneer.

The Tall One looked at Tom with unconcealed menace. "We'll see how well *pain* suits you, Swift." He picked up a small, curved knife and tested the blade. "This scalpel is used by plastic surgeons to peel back skin. Let's see what - " He broke off suddenly at a strange sound coming from his partner. It took Tom a moment to realize that the Kranjovian interrogator was trying to strangle a laugh.

"What are you doing?" The Tall One asked.

"I'm - ahem! - merely clearing my throat," the Kranjovian answered with a barely concealed grin.

"Oh, you think Swift is funny, do you Dsentri?" The Tall One stepped closer to his partner. "Perhaps, when I am finished, it will be time to see how well you do under the knife!"

"Do not think to threaten me, Tokatyan!" Dsentri snapped. "We control this laboratory! You Brungarians are at our mercy. We can wipe you out should the need arise."

Tom knew it was time to switch sides. "That's a laugh, Dsentri. The Brungarians have forgotten more about torture techniques than you Kranjovians will ever learn. Believe me, I know!"

Furious, the Kranjovian picked up a hacksaw. "The Brungarians? Every technique they learned they stole from us!" He brandished the saw in front of Tom's face. "I will show you what real torture means! And believe me, you *will* TALK!" But a gloved hand closed on the Dsentri's arm, preventing the saw from coming any closer.

"Oh, you think we stole your crude techniques from you, Dsentri?" The Tall One asked. "Why should we, when it's you Kranjovians who have stolen from us!"

"Fool!" Dsentri snapped. "We don't need to steal anything from you Brungarians! We have the finest scientists and engineers in the

world right here!"

"No, both you and the Brungarians steal from Swift Enterprises," Tom interjected. "You always have. Where else did the Black Cobra get the ideas for his new spaceship? His faster-than-light drive? His computer with the data crystals?" Tom kept his fingers mentally crossed; this was a dangerous throw of the dice.

Dsentri cackled with glee. "Yes, the Black Cobra stole most of those ideas from you Swifts! That anti-matter force field he threw around your phantom satellite was about the only original idea he ever had!"

The Tall One nodded. "Still, I'm not so certain about the faster-than-light drive. We never were able to reconstruct yours, Swift. Yet, the Black Cobra has already built one. I've never been too certain why, if he already has one, he's been so fanatic about learning how yours works." He paused and rubbed his chin thoughtfully. "How did you learn about his computer?"

Tom shrugged. "I broke into his office. I recognized the computer design right off the bat."

The Tall One's eyes narrowed. "You're lying, Swift. The Black Cobra never stole that computer design from you. In point of fact, I have no idea just where it came from."

"He must have invented it himself," Dsentri spoke up.

The Tall One shook his head. "The Black Cobra might be a genius at some things, but computer science isn't one of them. I've had some talks with his former colleagues after the affair with Nestria. The Black Cobra's background is mostly in particle physics."

"So, the Black Cobra comes up with his own faster-than-light drive," Tom said, as much to himself as to the others, "yet he needs to know about mine. And he has a highly advanced computer, the likes of which no one has seen before. He has both the Kranjovians and Brungarians working on a starship and trying to figure out how my transphotonic engine works." Tom looked back up at his interrogators. "Seems like he's playing things close to the vest."

"He's playing us for fools is what he's doing!" Dsentri exclaimed. He placed the hacksaw back on the tray. He looked at the Tall One. "Maybe it's time we both found out what his *real* agenda is!"

The door abruptly opened. The Black Cobra stepped in, followed by several other people. One of which was Bud. The other, holding a gun on him, was the Leader that had captured them in the mountains!

"My so-called *real* agenda was to help your respective countries defeat both the Swifts and the United States once and for all," The Black Cobra said quietly. He walked up and examined Tom. "Well, I can see that Swift has used the common technique of turning you two against each other." He sighed. "I should have known this would happen." He turned back to the others. "But I needed to locate Barclay before he did anything else. Fortunately, Smirnoff here was able to help me." The Black Cobra looked at Tom with a grin. "That was a very foolish thing you did, flying off in your cart like that. As soon as Smirnoff reported that to me, I knew you two were here, and had probably located the lab. It was just a matter of time before you tripped up."

Tom, however, noticed Bud giving him a subtle nod. Though Bud's hands were tied behind his back, he was fiddling with his watch's

controls.

Buying his friend time, Tom asked him, "What happened, Bud?"

"I can answer that," the Black Cobra said. "Once I had you captured, it wasn't hard to figure out how you were getting around the labs. I found several of the air vents open. And Mr. Barclay here, sabotaging the control board of my spaceship, *The Black Sun*. Fortunately for us, we intercepted him before he could cause any further damage."

Tom kept his face neutral, but inwardly frowned. Why was Bud doing anything to the ship's control panel? He was supposed to be altering the insulating foam for the fuel lines. Then it hit him: Bud must have discovered that Tom had been captured. If the Black Cobra figured out what they'd been up to, it would have all been for nothing. So Bud deliberately made it look as though they'd only been here a few hours and had only just started with their sabotage. Clever. But would the Black Cobra buy it?

Tom never found out. Bud suddenly spoke up. "You want damage? I'll give you damage!" Bud spun around on his heel and activated the microrepelatron. It had been set on a wide beam. The Black Cobra, Smirnoff, Dsentri, and The Tall One went flying. Tom's interrogation chair was knocked on its back. There was a click, and the arm and leg restraints flew open.

Bud rushed over to his friend. "Tom, are you okay?" he asked anxiously.

Tom nodded, coughing. "Better than they are." He nodded in the direction of the other four. They'd been thrown against the walls, and were unconscious. Tom knew they wouldn't stay that way for long. With a slight groan he regained his feet and went to work on Bud's bonds. As he tugged at the knots, he said, "I'm fine. At least I was braced for it." All the same, he felt as though he'd been belted one across the arms and chest with a steel pipe. His ribs were probably bruised. A moment later he'd yanked the knots apart. The rope fell off. Bud massaged his wrists. "Let's go!"

Tom shook his head. "Not yet, Bud. Quickly, before they wake up: strip the outer clothes off of Smirnoff and Dsentri. He's the other one. Put them over your own clothing."

Bud did as he was told. Together, the men set the interrogation chair back upright, then placed the Black Cobra's unconscious form in it. A push of the button locked him in place. Tom used Bud's rope to tie the Tall One, Dsentri, and Smirnoff in a daisy-chain pattern, interlocking their arms and legs. With their back against one another, it would take them a while to figure out just how the rope went. They were left behind the chair, out of the Black Cobra's view. Tom removed the keys from the Cobra's uniform. Poking their heads out, they were glad to see the corridor was clear. No guards had been posted either, a clear sign of the Cobra's overconfidence. They hurried back to the elevator.

"Where are we going, Tom? Are we leaving this place?" Bud asked him.

Tom nodded. "Yes, but not just yet. We're finished here, as far as sabotage goes. It's not really complete, but we're obviously not going to get a chance to do anything else. But before we leave, I want the Black Cobra's computer. It's in his private office."

Bud stared at Tom in disbelief. "Have you flipped, Skipper? How

are you going to carry a computer out of this place? It'll take at least three of us to lift it!"

Tom grinned at his friend. "Not *this* computer, Bud! Wait 'till you've seen it. You should be able to carry it without any problems."

Several Kranjovian workers were waiting to get on the elevator. Tom and Bud kept their faces neutral and ignored the workers, getting off the elevator as though they were just another pair of workers. It worked; the Kranjovians hardly glanced at them. In addition to being altered, neither Tom or Bud's faces were particularly well known among the ordinary workers. After making sure the corridor was deserted, Tom opened the door to the Black Cobra's office.

"There it is," Tom said, pointing to the computer.

"This is it?" Bud commented. "It looks like a fancy terminal." He frowned, looking closer. "Well," he added, "except for this weird glove, the super-thin monitor and the metal box it's sitting on."

Tom nodded, still grinning. "And that, Bud, is the actual computer itself."

Bud shot him an incredulous look. "That thing? The whole computer? Skipper, you've got to be kidding me!"

"Remember how incredible you once found my 'Little Idiots'?" Tom asked, referring to his miniature, voice-activated calculators.

Bud nodded, looking somewhat abashed. "Yeah, that's true. So the Black Cobra's invented a micro-miniature computer, huh?" He turned and grinned at his friend. "Tom, I'm disappointed! I expected you to come up with something like this first!"

Tom laughed, but replied, "That's the interesting thing, Bud. From what I can gather, the Cobra *didn't* invent this. He doesn't know very much about computers."

Bud blinked. "Did he hire someone else to do it, then? Another renegade scientist or something?"

Tom shook his head. "I honestly don't know, but I have a few suspicions. That's one of the reasons we're taking it with us. Plus these," he said, picking up the box of data crystals. Tom removed the crystal that he'd been viewing from the crystal reader, place it back in the box and closed it up.

"What are they?" Bud asked.

"Some sort of storage system, like a computer's magnetic drum or a magnetic core memory. But considerably more advanced, and, I think, able to hold a great deal more data. I'll examine them once we get the whole system back to Enterprises. Now let's get out of here."

CHAPTER 19: THE ESCAPE

It still took some time. Tom had to track down an empty room, then they had to hurry to it, slowed somewhat by their lightweight but awkward burdens.

It took Tom only a few moments to pry open an air vent. Then

they began crawling through air ducts. Tom stopped a few moments later. Their progress had been very slow: they had to move ahead a few inches, then drag the computer equipment. Move and drag. Move and drag. It was taking too long.

Leaving the equipment alone for a few moments, Tom moved over to an air vent. Looking out into the lab, he spotted some more lab coats.

"Tom?" Bud asked.

"Bud, come on. I should have thought of this first." Tom removed the air vent and they emerged into the lab. Tom had Bud bring in the computer equipment.

"What are you up to, Skipper?"

They were in a chemistry lab. Tom looked around for any kind of knives, but didn't find them. So, he carefully broke a large beaker, and gave Bud one of the larger shards. "Used this on the lab coats; start cutting large strips."

Bud nodded. "Oh, I see. We'll bind the computer stuff to our backs!"

Tom nodded as well. "Right. I should have thought to have brought some knapsacks with us, in case we had to do this."

It didn't take them very long, maybe fifteen minutes. But both men were nervous wrecks, expecting the door to open at any minute. Especially with all the noise they were making tearing the lab coats apart. Tom secured the base of the computer and the glove to Bud's back. Bud secured the monitor, keyboard and box of data crystals to Tom's. Moments later they were back in the air vents.

Their progress became faster. Soon they were climbing back up the shafts, past the huge fans. Finally they emerged from the vent by the cliffs.

Both men were amazed to see dawn in the air. Bud sniffed the air appreciatively. "Man, that smells good! Seems like we've been in the Black Cobra's lair for ages!"

Tom grinned, then sobered. "Come on, Bud. We've got to get back to the stables pronto. Once the Black Cobra is found and released, the hillsides are going to be crawling with guards."

Bud nodded. "I know. Even so, we'll have to proceed out of town at a leisurely pace, or we'll attract unwanted attention."

Tom sighed. "Right. We'll speed up once we're out of everyone's sight."

They began making their way down the hillsides. It became increasingly lighter, which helped. In spite of their need for speed, they had to be cautious. Tom didn't want either of them to trip and damage the computer equipment. Before long, the town came in to view. Bud and Tom snuck quietly back to the shed. Tom was pleased to see that the wagon was still there, and the mules in their stalls.

"Start hitching the team up, Bud," Tom ordered. "First, though, let's get the computer equipment concealed."

"Oh, don't bother," spoke a familiar-sounding voice. Both men whirled around. The Black Cobra stepped out of the shadows, followed by The Tall One, Dsentri, and more than a few Kranjovian guards. They aimed automatic rifles at the men. "By all means remove them from your backs. I imagine they must be feeling rather heavy by now,"

Tom stared at the Cobra in surprise. "But how...?"

"How did I know you'd be here?" The Black Cobra shrugged and lit

a cigarette. "It was rather obvious, I think. Or are you wondering how I escaped the chair? That was even easier. You forget, Swift, that I designed the chair. It had a concealed emergency release button, in case something like that were to happen to me." Tom noticed him shooting a glance at the Tall One and the Kranjovians. Obviously, the Black Cobra wasn't going to allow either of his erstwhile allies to interrogate him for any length of time. "I freed the others. They wanted to search the air vents, but it was pretty obvious you'd be coming down here. A few inquiries soon turned up the inn you were staying in." The Cobra shook his head. "It must have taken you a while to reach the surface and get down here. We've been waiting for over an hour."

Tom shrugged. "Sorry to have kept you waiting. Guess we didn't notice the time." As if out of habit, Tom raised his watch arm up as though to look at the time. The movement was so casual that the Black Cobra didn't say anything for a moment. Too late he remembered Bud doing something with his watch back in the cell.

An invisible fist struck the Cobra in the face. His cigarette went flying, landing in a pile of hay. It didn't go out.

Bud had picked up on Tom's cue, and used the ray on both Dsentri and the Tall One. Both went flying once again. They struck the Kranjovian guards behind them, knocking them down. Unfortunately, that movement knocked over a small can of kerosene for the lanterns. The can wasn't sealed tight, and fumes began to leak out.

Tom and Bud exchanged horrified glances. Even as Tom yelled, "Bud, get the horses, fast!" the fumes caught and the can exploded, sending a shower of burning kerosene over the hay and the stall walls.

The men wasted no time opening the stall doors. They not only got their own horses out, but the others as well. Tom used the watch's microrepelatron to shove the Black Cobra and his men out of the stall to a place they'd be safe - and incapacitated. That was all he had time for. The stall was already blazing.

Quickly, Tom and Bud hitched the horses to the wagon. Tom raced back into the inn, his hand on his watch in case he needed it. Up in their room, he was relieved to find that their few items had been undisturbed. He quickly gathered them and raced back down. He tossed a few gold coins to the innkeeper, thanked him in Kranjovian, and left. The innkeeper stared at the coins in surprise. Tom had paid him the equivalent of two month's stay. He quickly hid the coins away. A moment later he heard about the fire in the stall.

Bud already had the horses hitched. Tom climbed aboard and snapped the reins. The horses took off at once.

"Tom, we're not going to get very far with all the wood we still have left!" Bud exclaimed.

Tom grinned at his friend. "We'll take care of that soon enough, don't worry!"

They managed to make it several miles out of the town before they heard sounds of pursuit.

"Tom, what are we going to do? We're miles from the Yugoslavian border, and not likely to get through in any case!"

Tom shook his head. "Don't worry, Bud. I have a contingency plan ready. But we've got to reach a certain spot for it to work."

To Bud's surprise, Tom was heading up higher into the mountains. "Where are we going?" he asked.

"You'll see" Tom told him.

Tom nudged what looked like a knot on the wooden footrest. At once another control panel raised up and locked into place. He punched a button and adjusted a few knobs. Bud felt the increase in speed at once. The horses were flying up the path. Bud turned to his friend. "Tom...?"

Tom nodded. "I've activated a miniaturized G-Force Inverter. It's giving the wagon a little extra push, which helps take the strain off the horses. That's why they're able to run faster."

Even so, it wasn't long before some Kranjovian jeeps began to catch up. Tom waited until they reached a curve on the path that bulged outward. There was a steep drop-off on one side, and a high cliff on the other. As they drove slowly around the curve, Tom yanked a lever. The wagon bed raised up, allowing the wood to slide off. "That should keep them out of our hair for a bit!" Tom said.

It certainly seemed to. But Tom and Bud had to slow down. Even with the help of the G-Force Inverter, the horses were becoming winded.

"How much further, Tom?" Bud asked.

"Another couple of miles," he answered.

Once again the Kranjovian jeeps began to close in on them. Bud glanced behind. "Skipper!" he exclaimed. "They're aiming a machine gun at us!"

"Oh, are they?" Tom asked. He punched another button. Bud heard a strange hissing sound, and looked behind them. A familiar-looking white substance began to coat the dirt road. "Durastress Foam!" he exclaimed recalling how it had once been used to help land a small planetoid.

Tom nodded. "Let's see how well they can drive on that!" he said, pressing a button to shut it off. "And don't worry about any environmental damage. This batch of foam is specially engineered to convert into a harmless gas in a few hours."

The Kranjovian jeep slowed as it approached the foam. The driver and the leader exchanged puzzled glances. Then the leader motioned for the driver to continue. Revving the engine, the jeep drove straight into the foam. At once, the jeep's wheels spun as though they were on ice. The jeep fishtailed and began heading off the road. With a cry of fear, all three Kranjovians bailed from the jeep as it plunged over the embankment. Another Kranjovian jeep approached. Bud grinned as it came to a halt.

"Looks like you fixed 'em, Skipper!" he cried.

Tom nodded, very pleased.

A short time later, they emerged on a bald spot on the ridge of a mountain range. Tom shut off the G-Force inverter, then activated a third hidden control panel. On it were just a few dials and knobs, and one large button that Tom proceeded to push.

Bud was amazed to hear the sounds of many gears meshing and clanking. His jaw dropped as the wagon bed, now free of wood, split down the middle and a long, slender pole rose from the bed. It unfolded piece by piece, finally ending in a strange cup-shaped piece. This piece split in two as well, and what looked like an umbrella promptly snapped into place. Bud recognized it at once: a radio parabola dish.

Tom began adjusting the knobs, looking at the dials. Finally,

all of the dial needles flipped to the right, and a green light came on. Satisfied, Tom turned to his friend, "Okay, Bud, get ready to - " He was interrupted by another voice.

"Well, Tom Swift, it looks as though you've run out of places to run to." Both men whirled around to see the Black Cobra sitting in the side car of a motorcycle. It was driven by the Tall Man. Dsentri sat in the back. All three men had guns trained on Tom and Bud.

"I don't know," the Cobra continued, "what it is you're transmitting to your Outpost in Space, but if it's a call for your 'cavalry', I'm afraid you're a bit too far inland for them to do you any good. The Kranjovian air force may not be the best in the world, but even they would be able to shoot down the *Sky Queen* or any of your other air ships."

"That's an outrage!" Tom heard Dsentri exclaim. The Tall One, though, had a smirk on his face.

"Guess you're right, Cobra," Tom seemed to admit. "Guess you have us right where you want us." Both Bud and the Black Cobra heard a curious taunt in Tom's voice.

"Yes, I do," the Black Cobra replied, his voice tinged with wariness. He looked around, as though expecting to see an army or air force rush to Tom's rescue. Seeing nothing, he waved his gun at Tom and Bud. "Now, climb out of the wagon with your hands in the air. And remove those wristwatches of yours. It's time we returned to the lab for a little chat. And rest assured, I will do the asking this time."

"And if I refused to do this?" Tom asked.

"Perhaps your friend here would like to have a third eye in his forehead," the Black Cobra growled. "I could do it right now. After all, I really don't need to question him." He began to aim the gun in Bud's direction.

Tom promptly put his hands in the air, and urged Bud to do likewise. "Okay, you don't need to spell it out. We can take a hint." Still, Tom made no move to leave the wagon. Bud sensed that his friend was stalling for time.

So did the Cobra. "What are you waiting for, Swift? What, exactly, do you expect to happen up here in - "

In the blink of an eye, the Black Cobra, the jeep, the Tall One and Dsentri - in fact, the entire Kranjovian mountain range - vanished. Before Bud could even manage a startled "huh?", a voice spoke out: "Sorry for the delay, Skipper."

Bud turned around to stare at Ken Horton, their chief communications officer of the Swift's Outpost in Space. Bud looked around and noticed that they were in a huge boxed chamber with the floor curved on either side. It took Bud a moment to realize that they were in a Transmittaton reception tank.

Ken Horton continued, "A power relay blew out at the last moment. Seemed to take forever to track it down. We received your signal perfectly, though."

Tom nodded. "I wondered what was taking you guys so long. Ready for the next step?"

Ken nodded. "And away you go!" He jabbed a button.

Ken and the space station chamber vanished, to be replaced with another large chamber, this one with a flat floor. In front of them stood Mr. Swift, Wendy, Phyllis and Sandy. Everyone clapped as the

two men got off of the wagon. Dr. Anton Faber came forward to tend to the horses.

The men exchanged hugs with their fiancés, and Tom hugged his father. "Did you get what you needed, Tom?" he asked his son.

Tom nodded. "And what I didn't get, we ought to find in this!" Tom went back to the wagon and removed the Black Cobra's computer from the compartment he'd hidden it in.

Tom Swift Sr. stared at it, as did everyone else. "What on earth is that supposed to be?"

"Believe it or not, Dad, a computer! A computer like nothing you've ever seen before. We need to get it hooked up and running. I should be able to rig a power converter so it can run on US current."

Bud turned to him. "So, Tom, this was your contingency plan, huh? 'Lektromag' us out of Kranjovia in case we got caught!"

Tom nodded. "Sorry I couldn't warn you in advance. I wasn't certain if I'd have to use it or not."

"But why up to the Outpost?" Bud asked.

"Just in case. I thought about doing in one single step: from Kranjovia (or Brungaria) to here, but thought a two-step might be safer."

"We know a thing or two about two-steps in Texas!" Wendy told them with a laugh. "So Tom's right to have done it that way!"

The others laughed as they left the lab. Both Tom and Bud gasped in surprise as they went outside. It was pitch-dark.

"What time is it?" Tom asked his father.

"About three A.M.," Tom Sr. replied. "You've lost some time!"

Both men glanced at their watches. The watches showed it was 8:55 AM! They broke out laughing. "Guess we'll have to cat-nap to make up for it," Tom said.

Bud groaned. "I don't feel the least bit sleepy. Tired maybe, but not sleepy. Skipper, you've given a whole new meaning to jet-lag!"

Tom nodded. "Guess so, Bud. I never really thought about it like that. Transmittaton travel does introduce some interesting problems. Well, we'll think about it in the morning - late morning, I mean."

"Wendy, do us proud when we get up," Bud said. "Tom and I have hardly eaten anything for days. I'm starved!"

Wendy nodded her pretty head. "Don't you guys worry! I'll serve y'all a proper west Texas breakfast!"

Wendy was as good as her word. When both men rose about four hours later, they could smell the appetizing aroma of pancakes, sausages, hash browns and bacon. Plus eggs over easy, toast, donuts, and coffee.

After washing and shaving, they sat down in Tom's private office and tore into their breakfast. "Now don't y'all go making yourselves sick!" Wendy pretended to scold them.

Hearing her words, the men slowed down a bit, but not by much. As they scraped the last of their plates clean, Mr. Swift came in to talk with them.

"Tom, Bud, we have the Black Cobra's computer set up. It's connected to a power regulator, so there shouldn't be any problems on that end."

Tom nodded. "Great, Dad! Give us a few minutes to wash up and we'll get right on it."

About five minutes later, the men were gathered together in Tom's lab. They watched with amazement as Tom switched on the computer and monitor, then put on the glove. The monitor, with its color screen and tiny, razor-sharp pictures of yellow folders, drew whistles of amazement.

"You haven't seen anything yet!" Tom told them. With his free hand he removed a data cube and inserted it in the small reader. None of the cubes had any kind of marking, so Tom had to poke at folders until one finally opened. Once again they were confronted with a list of objectives, though this one concerned itself with various parts of the Black Cobra's starship engines.

Mr. Swift shook his head. "Tom, this is amazing! It makes even our new computers look quaint."

Tom sighed. "I need to find out how it works. But I'm going to have to do so very carefully, so nothing gets damaged."

"And that's not all, son," Mr. Swift said gravely. Tom turned to look at him. "There may not be much time to find out. Chances are, with his computer now in our possession, the Black Cobra's going to step up all of his plans. Yes, the loss of the computer is going to set him back a bit, but he may have another one, a backup. If so, he can proceed with his plans at an accelerated rate!"

Tom nodded. "You're right, Dad! I didn't even think about that! Right now, my transphotonic engine is still barely out of the experimental stage. The results from the last test are promising, but there's not enough data to be able to build a full-sized model, let alone see if humans or anything organic can survive in it."

"And yet you just might have to," Tom Sr. said. "I'm not certain, but I have a hunch that the Black Cobra's been after your engine to see if it's more efficient than his own. His FTL engine might consume a huge amount of power - a problem that, so far, yours doesn't seem to have."

"Right, Dad," Tom agreed. "That may well be what this whole attempt to steal mine has been about." He turned back to the computer. "Well, only one way to find out. Before I can begin to figure out how the computer works, I've got to find out what's on these files. They should tell us a lot."

"Is there a way we can get a printout?" Mr. Swift asked. "It

would certainly make reading the files much faster."

Tom nodded. "Yes, indeed." He removed the glove and stood up. "Let's find out."

The two men began searching the computer. It didn't take long. In the back were several connection ports - one of which was made for a standard printer cable. Mr. Swift had one of the speedy band printers brought up and connected. The band printer used a large metal ribbon with characters on it, and could print out five pages in a minute. Most other printers chugged along at a page every two or three minutes.

Tom quickly attached the cable, and then slipped the glove back on. A moment later, though, he stopped, puckering his mouth.

"What's wrong, Tom?" Bud asked.

"It's just that I have no idea how to command the computer to print!" Tom blurted out in frustration.

"Yet the port is there," Tom Sr. stated. "Son, there must be a command of some kind there that will cause it to print."

Tom nodded, frowning his brow. He studied the screen with its open file. He pointed the glove at the screen and made motions, but other than closing the file or scrolling down its contents, nothing was accomplished. Tom was about to give up when a new box opened on the screen, asking if he wanted to move the file. "Hmmm," Tom muttered. "How did I do that?"

Tom examined the glove, and noticed that his middle finger was pressed against the index finger. Keeping them together, he jabbed the screen again. The box closed. He jabbed it again. The box reappeared. Tom closed it once again, and pressed his third finger against the middle finger. Jabbing the screen caused a new box to open, asking if he wanted the file deleted. Hastily he closed it. Now he tried his fourth finger. This time, the screen asked him if he wanted to print the file.

Tom Sr. patted his son on the shoulder. "Looks like you discovered a way!"

Tom nodded. He poked the "Y" on the screen, and at once the band printer began to print.

Several hours later, both men were pouring over the files. Several of the cubes had been encrypted, but between the men they soon broke the codes and were looking at the data.

What they read astonished them. In the years following the encounter with the Green Orb, the Black Cobra found out about the Space Legion, which once tried to steal a cache of information Tom's Space Friends had needed. The Cobra was able to contact them in turn, hoping become allies with them against both Tom and his Space Friends. But the Space Legion was already falling apart from in-fighting. However, one of them referred the Cobra to an older, possibly more deadly alien race called the *Tekili-Li*. The Space Legion alien communicated with the *Tekili-Li*, and they in turn contacted the Black Cobra.

Tom noticed his father's look of surprise. "Dad? You look as though you know the name."

Tom Sr. turned to his son. "Don't you?"

Tom shrugged. "It sounds vaguely familiar, but..."

"Have you forgotten your Edgar Allen Poe?"

Tom blinked. "Oh! Of course! No wonder it sounds familiar."

Bud looked at the two men. "Eddie Allen Poe? The 'Raven' guy? What's he got to do with this?"

Tom looked up at his friend with a smile. "Did you skip American literature in high school, Bud?" Before Bud could answer, Tom went on: "Edgar Allen Poe wrote a long novel entitled *The Narrative of A. Gordon Pym*. It was about a young man who stows away on a merchant ship and his various adventures at sea. The novel ends with the crew heading into a strange, ice-free part of Antarctica. As they're being drawn into this odd ice-cave, they keep hearing a strange sound: 'tekili-li, tekili-li.'"

"That's not all," Tom Sr. spoke up. "A later writer named H.P. Lovecraft, who specialized in horror stories, also wrote about the people he called the Old Ones, who inhabited Antarctica before it was frozen over. He described them as being shaped like a hexagonal tube, with a star-shaped, squid-like head and many tentacles."

"Which," Tom said grimly, "is an almost exact description of these aliens who contacted the Black Cobra."

"Further," Tom Sr. went on, with a nod to his son, "what Lovecraft said about them seems to have a considerable basis in fact. The Tekili-Li once ruled the earth among many other planets. They did have a base in Antarctica at one time. Then there came some sort of collapse, much as earth's Roman Empire once did."

Tom took up the story. "What caused the collapse is hard to say. The Tekili-Li hushed up at that point and didn't elaborate. But the Black Cobra was able to gather a few hints. From what he can tell, the Tekili-Li and another alien race went to war. Neither side really won, and the Tekili-Li's empire was wiped out. They've been slowly gathering the pieces back together. And one of those pieces is our planet."

"But before they could try to reoccupy us," Tom Sr. took over, "they found that another alien race had been in contact with us: the Vashanti, who we've always referred to as our 'space friends'. The Vashanti are a very advanced race compared to the Tekili-Li. The Tekili-Li hate and fear them. But the Vashanti haven't been able to make direct contact with us. We know they've visited our planet in the past, we found the evidence down in the Yucatan and on the bottom of the Atlantic. The Black Cobra isn't too certain what keeps the Vashanti away. The Tekili-Li aren't very forthcoming with that information either. But again, the Black Cobra's been able to pick up a few hints. One of them being that it has something to do with the earth's strong magnetic fields. It seems to affect the Vashanti and their equipment in peculiar ways. They still haven't been able to overcome it, though the Cobra isn't too certain just why. But that hardly matters. There's one other thing that has kept the Tekili-Li at bay."

"What's that, Mr. Swift?" Bud asked.

"The Galaxy Ghosts."

"They're afraid of them?"

"Deathly afraid. It seems that our space friends - the Vashanti - weren't the only ones who crossed paths with the Ghosts as they came into our galactic neighborhood. The Tekili-Li had battles with them as well. And lost. And then they saw something amazing..."

Bud perked up. "Tom's stopping them from invading our world!"

Tom Sr. nodded. "Precisely, Bud. That really struck some fear

in them. For our planet to stop an invasion of that magnitude, with hardly any effort, must have seemed like magic to them."

Tom took over. "So, their plans to invade our world were put on hold for a while. They needed someone from our planet who would aid them."

"Then along comes the Cobra," Tom Sr. interjected, "looking for an ally against both you and the Vashanti. It comes as no surprise that their paths would cross."

"The Tekili-Li," Tom went on, "began feeding the Cobra highly technical information: a FTL drive, this very computer. Small wonder it's so advanced."

"But how did the Tekili-Li get their information to the Cobra?" Bud asked, puzzled. "I mean, surely your space friends would have found out about it, and tipped you guys off."

Tom nodded. "I wondered about that as well, Bud. But even without the information from the computer, the answer's pretty obvious: they met out in space."

"But Tom," Bud objected, "the Cobra's ship isn't finished - " then he broke off. "Oh, I forgot about the other one. The one that fired on us and stole the probe."

Tom nodded. "Yes, he obviously had a backup ship stashed away someplace."

"Now comes the bad news," Tom Sr. said in a grave voice.

"What's that?" Bud asked.

"The Black Cobra's plans for Earth. He's expanded on the anti-matter field he once put around Nestria. It's now huge enough to use on the sun itself."

"On the sun?" Bud said with a laugh. "No one goes to the sun! Why would he want to do that?"

"It will cause immense solar flares, distorting the shape of the sun itself. The increased heat output would be bad enough in itself. But the effects on the earth will be devastating!" Tom Sr. exclaimed.

"How bad?" Bud asked in a small voice.

"Bad enough," Tom replied. "First, the Van Allen belts will expand outward. Next, the ionosphere, which acts as a barrier to the sun's heat, will collapse as it expands with the earth's magnetic fields. Without the ionosphere, the earth's temperature will increase enormously. The continents will be flooded as the ice melts off of the poles. The death toll from this will be in the hundreds of millions."

"But that's fine with the Tekili-Li. This will allow them to reclaim their lost base in Antarctica. It's currently buried beneath miles of ice. It's fine with the Cobra as well: the remnants of humanity will retreat to the poles, where they can be easily managed by the Cobra, the Brungarians and Kranjovians. Smaller groups of humans are much easier to dominate."

"And that's not all," Tom Sr. put in. "The Black Cobra plans to set up a base on Mars. Don't forget that Mars will now be much warmer, allowing for easier terraforming."

"Not to mention his FTL drive, which will give him the stars. Assuming he can find habitable planets, the Black Cobra can go anywhere he wants," Tom pointed out.

"Or even if he doesn't find any habitable planets close by, he may not even need them," Tom Sr. said. Both men looked at him in

surprise. Tom Sr. nodded. "From what I can gather, the Tekili-Li's technology is advanced enough that the Black Cobra may be able to live in space itself! The Tekili-Li always did things on an immense scale. The Black Cobra, utilizing such technology, could build himself an almost moon-sized space station if he wanted. Who needs a planet?"

Bud whistled, the implications of such a feat staggering his imagination. "But wouldn't such a feat take years, even decades to achieve?"

Tom nodded. "Indeed. But the Tekili-Li are very advanced biochemists. They may have ways to prolong human life for centuries."

"Well, possibly," Tom Sr. said. "We really don't know for sure. But we certainly can't rule it out."

"One thing though," Bud asked. "If the Tekili-Li are so advanced, why do they need the Black Cobra's help to cause all these solar flares? Why can't they do this themselves, or worse?"

Tom grinned at his friend. "We were wondering the same thing, Bud. The Black Cobra, while certainly a genius by our standards, could hardly be thought the same by theirs. Dad and I think that a good portion of the Tekili-Li's science may have been forgotten. Astrophysics may have been part of the portion."

"If so, the Tekili-Li may well resent the Black Cobra's giving them the solution," Bud pointed out, "like an older, absent-minded professor might well resent a freshman student pointing out a flaw in his lecture."

"True enough, Bud," Mr. Swift answered. "Even so, that won't prevent the Tekili-Li from utilizing the technique the Black Cobra comes up with."

Before the conversation could go any further, the phone on the wall rang. Tom Sr. picked it up. "This is Tom Senior speaking ... what's that, Harlan? ... uh-huh ... uh-huh ..." Tom and Bud were alarmed at Mr. Swift's grave expression. "... yes, of course ... I'm very glad you let us know. Yes, we'll get right on it." He hung up.

"Dad?" Tom asked.

"Son, NATO just picked up evidence that the Black Cobra's starship has launched!"

"What!" Bud exclaimed. "So soon? I didn't even think it was ready yet!"

"He really must have the Brungarians and Kranjovians work around the clock to finish it, or at least make it launch-ready," Tom commented.

Tom Sr. nodded. "I'm afraid so, Tom. Apparently, he also has a radar-jamming device. One of our infrared satellites picked up the heat trail from the rockets, though."

The phone rang again. Tom Sr. answered it once more. "This is Tom Sr. ... okay, we'll be right down!"

"What now?" Bud asked.

"Our space friends - the Vashanti - have started sending us a message."

Tom shook his head. "There's no way that this could be a coincidence! They must have been keeping their eye on the Black Cobra as well."

"Let's go see what they have to say about it, Skipper!" said Bud.

The men raced down the corridor to the space communications room. The green computer monitors displayed the message, as did the

printers:

SPACE FRIENDS TO TOM SWIFT. URGENT! THE BLACK COBRA PLANS TO MEET WITH THE - here there were the usual mathematical symbols - AND GIVE THEM THE PLANS FOR CAUSING DANGEROUS SOLAR FLARES IN YOUR SUN. YOU MUST PREVENT THIS AT ALL COSTS. THE - math symbols - COULD USE THIS TECHNOLOGY ON OUR WORLDS AS WELL. GOOD LUCK.

Tom sighed. "Well, this doesn't tell us anything we don't already know."

Tom Sr. nodded. "True, Tom, but it does give evidence to the idea that the Vashenti are vulnerable to high magnetic fields, or else they'd be able to stop it themselves."

Tom nodded. "I guess that's true. Well, we'd better not delay any longer. It's time to get the *Cosmotron II* ready for battle." Tom thought for a moment. "And maybe a contingency plan as well..."

He, Bud, and his father huddled together for a moment, quietly exchanging ideas. Then Tom Sr. nodded. "I'll get right on it, Tom."

A few hours later, the *Cosmotron Express II* sat waiting final preparations for take-off. Tom had loaded the *Cosmotron II* with the combat version of the Spider-Crab. Like the *Cosmotron II* itself, the Spider-Crab contained an X-Razor, super-repelatrons, the heat weapon, as well as rotating cannon that fired projectiles. The cannon didn't actually "fire" anything: instead, each projectile - composed of Durastress - contained a miniature G-Force inverter, allowing the projectile to accelerate to incredible speeds in the fraction of a second. These projectiles contained computer brains based on Tom's Little Idiot calculators. The electronic brains would lock onto a target and change course if the target attempted evasive maneuvering.

Before they left, Phyll and Sandy insisted on being present at the launching. Both women gave their men a kiss, wishing them luck on their mission.

"Don't worry, you two," Tom told them, lifting Phyllis's chin up. "We'll be back in time for the wedding!"

"We're going to hold you to that promise, brother dear!" Sandy answered. She smiled, but couldn't keep the worried look out of her eyes.

"You two come back safe," Mrs. Swift told them.

"No need to worry, Mom," Tom assured her. "The Black Cobra's as good as taken care of!"

With that, the men entered the *Cosmotron II*'s hanger bay, and rode the elevator up to the control room. Tom began flipping switches, taking the engines off stand-by and up to full power. On the control console, power meter needles climbed steadily, as did the new digital display meters that were fast becoming popular in the electronics world. With a final wave to the people outside, Tom pushed the lever, engaging the repelatrons. The *Cosmotron II* rose at a steady 1-G. Soon they penetrated the upper atmosphere and were soaring into space. Tom noticed an odd grin on Bud's face.

"What's up, Bud?" he asked his friend.

"Oh, nothing, Skipper," Bud replied. "I'm just thinking how different space flight is now compared to our first flight into space in the *Star Spear*."

Tom laughed. "Yes, that was quite a wild ride, wasn't it? I had

nightmares for days afterwards, clinging to that one stanchion while I was trying to repair the 'kicker'." He nodded reflectively. "Yes, I suppose space flight's now becoming routine." He sighed. "But I guess that's how it should be, Bud."

Bud nodded. "Right, Skipper. That's been one of our goals for a long time now. Remember your space kite?"

"And its follow-up, the *Solar Sailer*. They didn't turn out to be as cost-efficient as I'd hoped, nor did they open the doors to space." Tom shook his head. "How strange that it would turn out to be the repelatrons that did the trick. With my portable nuclear power plant giving unlimited energy, and the G-Force Inverter taking over for the repelatron's somewhat clumsy steering ability, space flight has moved from an almost impossible dream to a rather daily routine, much like air travel in the twenties and thirties."

"And don't forget your space solartron, which provides almost unlimited amounts of food." Bud put in.

Tom laughed. "Yes, the Mark III Solartrons are a great improvement over the bulky, energy-hogs the first two versions were."

"Yeah," Bud agreed. "They could only make simple elements, too. The Mark IIIs can make just about anything!"

"But they can't cook!" Tom said with a laugh. He'd tried that before several years ago. An attempt at a hamburger-and-fries meal came out, well, strange-looking. The elements combined correctly; they even smelled good. But the computer coding needed to create a savory-looking meal proved frustrating. In the end, Tom gave up on it. Wendy was vastly relieved. "The last thing ah need," she said, "is for a machine to put me out o' business!" But she did enjoy the machine's ability to create what she needed for her meals; it saved considerably on pantry space.

Swift Enterprises leased out a considerable amount of their famous machines: the atomic capsule, the repelatrons, the G-force inverter. And Durastress. Between those for, the world had undergone a radical transformation. Internal combustion and jet engines joined the steam engine in the dustbin of history. Power plants of various types folded up, unable to compete with the atomic capsule. Even the Swift's own atomic reactor the Citadel in New Mexico was practically obsolete, other than for research. Companies like Astro-Dynamics Corporation were building and launching their own space stations. Cosmoprises, now reorganized under Ritt Kinkaid, were planning to build colonies on the moon and Mars. If Swift Enterprises didn't beat them to it.

Now all of that stood in danger if the Black Cobra succeeded. But Tom had no intentions of letting that happen.

The radar screen suddenly bleeped. Tom and Bud exchanged anxious glances. They'd picked up the Black Cobra's starship.

The *Cosmotron II* began closing fast. Tom eased up on the superrepelatrons, not wanting to overshoot his enemy. There were no signs of the Cobra's ship through the *Cosmotron II*'s enormous window, but that didn't come as any surprise. They knew it was painted jet black, much like the Cobra's back-up spaceship they'd confronted months ago. Tom had to rely on the ship's instruments.

Abruptly the Cobra's ship began to get closer. "Looks like we've been spotted, Bud," Tom said quietly. "They're slowing down."

"Guess they want a confrontation as well," Bud said, cracking his

knuckles.

"Let's give them one, then," Tom said. "And hope we were able to do enough sabotage to counter any retaliation."

The Black Cobra's starship soon grew close enough for the men to see it. It wasn't easy to make out against the blackness of space. But Tom had seen it in the Kranjovian hanger, and studied the diagrams. In the atmosphere, the starship used a "flying wing" shape to get it up into space. There, it underwent an almost origami-type transformation, folding the wings into itself until it became a long, somewhat sleek cylinder. Even as Tom watched, it transformed again, weapons pods opening up.

Tom, however, made no move to switch on his defense systems. He and Bud just sat back and watched...

On board the *Ashtorath's Revenge*, the Black Cobra gazed out at the *Cosmotron II*, eyes glinting with malice. "Let's give Swift and his friend a warm welcome, shall we?" he asked his Kranjovian and Brungarian comrades. "Deploy the gamma cannons!"

The gamma cannons, as their name implied, fired concentrated bursts of gamma rays at their target. The cannons rotated rapidly, each of the five tubes firing a single burst. The firing rate was about four thousand bursts per minute.

In the control room, the sounds of the cannons rising up and locking into place could be faintly heard. "Lock them on target!" The Black Cobra ordered. On the screen at the weapons console, a superimposed bullseye turned from white to red as its computer locked onto the target. "We haf a lock!" the weapons officer stated.

"Fire!" The Cobra ordered.

Moments later there came curious grinding sound. The weapons officer stared in amazement and concern as several red lights came on.

"What is happening?" The Black Cobra demanded. "Why aren't the cannons firing?"

The Kranjovian weapons officer cleared his throat with an audible gulp. He tried flicking a few switches, but the grinding noise continued. "It - it's not turning! The - the turrets are jammed!"

The Black Cobra glared at him. "Use the plasma bombs, fool!"

Plasma bombs were to be ejected at their targets, then detonated. The bombs created an intense electromagnetic field, shorting out the electronics on an enemy's ship.

The plasma bombs ejected without any trouble. The problem was, they failed to detonate. Each one was a dud.

"*Fusion missiles!!*" the Black Cobra roared.

The missiles were fired - and stuck in their tubes. As near as the weapons crew could determine, the ejection ports were a fraction of a degree smaller at the exit than at the tube loading port. The resulting backfire almost vaporized the weapons crew. The bridge crew hastily disarmed the warheads before they could detonate. Then a message came from the *Cosmotron II*.

"Put it on," the Black Cobra snapped.

"Hello, Cobra," came Tom's voice. "Looks like your weapons aren't working very well. Rest assured mine do. I think now would be a good time to surrender."

The Black Cobra strode over to the console and mashed a button. "Never, Swift! Maybe my weapons won't work, but I can still deliver

the solar disrupter plans to the Tekili-li." Following the theft of his computer, The Black Cobra had been left with no choice but to reveal some of his plans to Bronich, The Tall One and others. After all, once they went to the Tekili-li's homeworld, the Brungarians and Kranjovians were going to know about it anyway. Had it not been for the computer, and the technical advice on the warp drive, they might have thought him mad and killed him. As it was, they gave him the benefit of the doubt, though with reservations. But the Black Cobra assured them that they would see the truth for themselves once they reached the Tekili-li's home planet. The Black Cobra decided to take them there right away, rather than waste endless months trying to convince them of the truth. He knew he was rushing his plans a bit, but figured it didn't make much difference in the long run. He continued: "My star drive works. Yours isn't even out of the prototype stage yet." He turned to his crew. "Activate the nonlinear gravity drive!"

"But - but sir!" the helmsman stuttered. "We're still inside the solar system's gravity well. There - there might be a gravitational whiplash effect!"

"We'll risk it. I think we're far enough out of the well that any such effect will probably be mild" He turned back to the com set. "So long, Swift. But don't feel lonely. I'll be back - with the weapons systems repaired, and a few of my friends to boot!" He laughed maliciously as he shut off any possible response.

"Activate the star drive!" he commanded once again.

The helmsman exchanged a worried look with the navigator, but did as he was instructed. Nothing happened. The stars remained unchanged. But a computer screen lit up. **INSUFFICIENT POWER**, it read.

"What?" the Black Cobra screamed. He leaned forward and jammed the button himself.

INSUFFICIENT POWER.

Shoving his men aside, the Black Cobra began flipping switches, diverting all of the ship's power to the star drive.

INSUFFICIENT POWER.

The Black Cobra was nearly foaming with rage. A tell-tale light came on at the com set. The Cobra smashed his fist on the button with almost enough force to break it.

"Going somewhere, Cobra?" came Tom's voice, taunting. "I doubt it."

"What have you done to my starship, Swift?" the Black Cobra screamed.

"Oh, a little change here, a small change there," Tom replied smoothly.

"Impossible! I went over the installation of the nonlinear gravity drive with a fine tooth comb! I would have found any evidence of sabotage!"

The shrug was evident in Tom's reply. "Very likely you would have, Cobra. But I didn't alter the hardware in anyway. Nor did I tamper with the schematics. Instead, I changed the fundamental basis of the underlying math itself. Your star drive functions perfectly, Cobra. But it's going to need an atomic reactor the size of the sun itself in order to work."

The Black Cobra staggered back from the console, stunned. So that was why those Laplace transforms had been so small! He had wondered about that, but only to a degree. Most of the math came from the Tekili-li themselves, and was almost excessively complicated. It had taken a long time to convert the math into workable spec sheets. He had been finishing up work on them at the time of Tom and Bud's capture. The primary reason he'd captured Tom's transphotonic engine had been in hopes of learning enough from it to speed up the job. But Tom's self-destruct mechanism had been too efficient. Tom had tampered with the math so that the nonlinear gravity drive's start-up power would seem to be producing enough energy for the primary engine to engage, but would, in truth, be starving it. He almost had to admire that.

For a moment the Black Cobra was at a loss. Going to the Tekili-li's system was out of the question. The *Ashtorath's Revenge* needed to return to the Kranjovian lab for repairs and retooling. Surrendering to Swift was also out. He had little doubt the *Cosmotron II* had sufficient weapons to disable his ship and tow it back to Earth. Then an idea occurred to him. *What's the old expression?* he thought to himself: *if you want something done...*

"Surrender? To you, Swift?" He paused for dramatic effect. "I'll think about it a moment." He switched off the com.

"If Swift calls back," he told his men, "stall him. Keep him occupied. I'm going to be very busy the next few minutes." Without another word, he turned and left the bridge.

Bud turned to Tom with a slightly incredulous look. "'Think about it a minute'?" he quoted. "What, exactly, is there to think about, Skipper? His weapons don't work and neither does his star drive. What's he planning on doing, calling the police?"

Tom gnawed on a fingernail, uncertain. "I don't know, Bud. Keep your eyes peeled. You know what they say about a cornered animal being the most dangerous."

Bud nodded. "Yeah, and the Black Cobra's one very vicious animal," he concluded, his confidence evaporating. He kept his eyes on the scope, and out the window.

Yet they saw nothing. The minutes dragged by. Tom was on the verge of signaling the *Ashtorath's Revenge* once again when the radar screen abruptly lit up.

"Bud..." Tom's voice sank to a whisper in pure incredulity. A missile had been fired at them from point-blank range - from behind! It was ten seconds away from impact. Tom made a stabbing gesture in the direction of the repelatrions, then halted. By the time he readjusted them to a short range, it would be too late. Which left only one thing to do.

The *Cosmotron II*'s explosion startled even the Black Cobra. He wrapped himself in the black, featureless tarp he'd used to disguise the fusion missile, then gunned the suit's jets. No point in hiding now. But he had to be careful, or he'd overshoot his ship.

Debris from the explosion expanded in a perfect sphere. Several pieces of metal ripped through the tarp, throwing him off his target. The Black Cobra hastily jettisoned the now-useless tarp, recalculated vectors in his head, and eventually made it back to the *Ashtorath's*

Revenge. In spite of its proximity to the *Cosmotron II*, the Black Cobra was pleased to see it had taken only minor damage. Soon he reached the airlock and cycled through.

He was slightly amazed at his welcome. The corridors of the ship rang with cheers, whistles, and the sounds of clapping. This, from the normally stoic Kranjovians and Brungarians! They patted him on the back and shook his hand. Even the Tall One had a smile on his face.

Eventually, the Black Cobra held up his hands. The celebration died down. "I ... appreciate the sentiment," he told them. "At long last, our greatest enemy, Tom Swift, is dead." He turned to one of his crew. "You did get that on videotape, I trust." The man nodded, grinning. "Good! We will soon show this tape to the whole world. All the nations of the world will know what it means to defy the Black Cobra. Not that it will matter much once we begin work destabilizing the sun. Soon the Earth will be changed beyond measure, and I will be in command of the remnants. Even the mighty Tekili-li will soon bow down before me! True, they have the technological edge. But only for a while. We can pretend to kneel before them and give them obedience. Let them become reckless and overconfident. Soon we will master their technology and then these so-called 'Ancient Ones' will bow down to us! As well as anyone else in this galaxy! Every star will be mine to do with as I please!!" The Black Cobra broke into a maniacal laugh.

Is this it, then? With Tom and Bud dead, will nothing prevent the Black Cobra from wrecking havoc on the earth and, with time, taking over the galaxy? Can anyone do anything to stop the Black Cobra? Perhaps the next book in the series, *Tom Swift and his Paramagnetic Initializer* can provide the answers to those questions.

Not necessarily ... The End