TOM SWIFT AND THE GALAXY GHOSTS

VICTOR APPLETON II

No. 33 in the Tom Swift Jr. series.

(1971)

TOM SWIFT AND THE GALAXY GHOSTS

With his latest invention, the Transmittaton, Tom Swift Jr. solves two baffling scientific mysteries. This ingenious device can atomize objects, send them great distances, and reassemble the atoms. What happens when Tom uses the Transmittaton to prevent a catastrophic invasion of earth by ghosts from another galaxy is only the beginning of a series of spine-tingling adventures for the young inventor.

At the same time Tom and his father are asked to take on an important mission. They are to locate a prehistoric giant mammal believed to be entombed in solid ice in theAndesMountainsand transport it to theUnited States. Despite attempts by the Swifts' crafty, vicious enemies to sabotage the project, father and son accomplish their dangerous mission with the aid of Tom's Transmittaton.

Unexpected thrills and high-voltage suspense fill every page of this gripping story.

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THE NEW TOM SWIFT JR. ADVENTURES

TOM SWIFT

AND THE

GALAXY GHOSTS

BY VICTOR APPLETON II

ILLUSTRATED BY BILL DOLWICK

GROSSET AND DUNLAP

A NATIONAL GENERAL COMPANY

PUBLISHERSNEW YORK

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PUBLISHED SIMULTANEOUSLY INCANADA

LIBRARY OF CONGRESS CATALOG CARD NUMBER: 74-130338

ISBN: 0-448-09133-x

PRINTED IN THEUNITED STATES OF AMERICA

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TOM SWIFT AND THE GALAXY GHOSTS

CHAPTER I URGENT SUMMONS

THE alert signal in the laboratory buzzed. Tom snapped on the radio to the Swifts' space station. The caller sounded urgent. "Message for the Swifts! Message for Tom Senior or Tom Junior!"

"Tom Junior here. What's up?"

"Emergency! Ghosts on one of Saturn's moons and heading this way! Come at once!"

"Ghosts! What kind of ghosts?" Tom demanded.

The radio voice replied, "Our observatory has spotted some strange objects on Mimas. They're too indistinct to identify. You'd better get up here fast!"

"Will do!"

As Tom turned off the radio, his father walked in. The eighteen-year-old inventor bore a strong resemblance to his famous parent. Tom Junior was a bit taller, but both had the same athletic build, deep-set blue eyes, and blond hair.

After Mr. Swift had been briefed on the radio conversation, he said, "We'd better go to the space station at once and try to figure out these ghostly figures. Let's see if they're really a menace before notifyingWashington."

"I'm ready," said Tom. "I'll call Bud."

Bud Barclay, the same age as Tom, was a flier who went on all Swift expeditions. He was muscular, black-haired, and full of humor. Within minutes he arrived at the lab and was told about the trip.

"Ghosts!" he exclaimed. "Sounds like a space nightmare. When do we leave?"

"Pronto," Tom replied.

It was dusk when the three drove through the Swift Enterprises complex to the airfield and took off for

FearingIsland, a thumb-shaped stretch of sand dunes and scrubgrass off theAtlanticCoast. Here the Swifts had established a launching area for rockets.

Tight security governed the island. When the alarm siren sounded, radar tracked unfamiliar objects. At night giant searchlights crisscrossed the sky with stabbing beams, and robot drone planes circled constantly to intercept spying intruders. An electrified guard net screened the beaches all times.

A rocket ship, ready for lift-off, stood on a launch pad. Mr. Swift and the boys climbed into space suits and Tom took the controls. There was a deafening roar and the ground vibrated as the myriad of repelatrons lifted the mammoth craft from its pad. One of Tom's most important inventions, these selective matter repellers sent a powerful downward thrust of repulsion beams. The great ship arced into the sky for a rendezvous with the space station, which was in an orbit 22,000 miles aboveLoonauiIsland south ofHawaii.

Bud settled back in his seat for the trip. "I suppose you'll use your megascope space prober to get a good look-see at those ghosts."

He was speaking of Tom's invention, an electronic telescope of potentially infinite range. By adjusting two waves to cancel each other at a given point, one could get a clear picture at any distance.

"We'd better be prepared to do something about the ghosts," Mr. Swift warned. "It's possible they're dangerous!"

Some time later the Swift space station hove in sight. Magnetized to it was the Atomic Spider-Crab. This radio-controlled device could be sent out to catch objects in space by means of large claws at the ends of its two arms. Along its belly were spinnerets through which Tomasite thread could be ejected and quickly spun around the person or rocket to be retrieved.

"Any stranded astronaut would be thankful to have that mechanical crustacean rescue him," Bud observed.

Tom agreed. "Even our automatic Comet Catcher might assist if the helpless man, or a stray space object, came near enough."

The Comet Catcher was a gigantic Tomasite net that moved around the hull of the space station. It was powered by repelatrons—instruments that repelled atomic radiation while generating counterradiation.

"Tom," said Bud, looking at the station's two telescopes, "I see your astronomers are still keeping an eye on the Blue Planet."

"Mother Earth? Why not, Bud? She's the most beautiful planet in the solar system."

Tom eased his rocket ship into the space station hangar, and the three passengers emerged into a hum of activity. A service crew was preparing a rocket for blastoff. Engineers, wearing magnetized boots, walked across the hull testing engines for metal fatigue.

"I'd like to get my fingers into some of that oily debris," Tom muttered. He always wanted to join in when a motor was being checked out.

"No time," Bud reminded him. "The ghosts are waiting for us."

The boys and Mr. Swift took an elevator to the observatory, where Tom's megascope space prober was located.

John Peterson, chief astronomer, came forward. "Boy,am I glad to see you!" he exclaimed. "Here! Take a look at this planetary dance!"

Tom sat down at the controls of the megascope space prober, snapped on the electronic circuitry, twisted the dials, and zoomed in on Mimas.

Steamy, dancing masses appeared, forming a circle of bright spots with darker areas between them. They began to pulsate rhythmically, fading into dimness, and then growing brighter until they were vivid once more.

"Wow!" Tom exclaimed. "I've never seen anything like this, including the iridescent gas we found on our own moon. How about you. Dad?"

"No, son, I haven't. And I'm sure John will bear me out that this phenomenon is unknown to all the sciences!"

The chief astronomer nodded vigorously to show he was as baffled as the others. "For a while they were coming closer, but they've gone back toward Mimas again," he said.

"What kind of substance do you figure those things are made of?" Bud asked.

Tom shook his head. "That's the mystery. Bud. It's impossible to tell their composition." He paused, then added slowly, "Photo-Essence might be the best description until we find out more."

"How will we do that?" Bud queried. "Take a whirl through space in the Cosmotron?"

The Cosmotron Express, designed by Tom Junior, had made several voyages into the solar system and was on round-the-clock alert for future trips.

"Let's try our space friends," Tom answered. "They may have some info on the ghosts."

The Swifts' space friends had introduced themselves by means of an interplanetary projectile that had crash-landed at Enterprises. The young inventor had decoded geometric markings on the missile, indicating a message. Using the same system he had sent back messages by high-power transmission. Two-way communication had resulted.

Gradually, by adding symbol to symbol and word to word, Mr. Swift had compiled a large space dictionary. He and his son could now carry on extended communication with their planetary friends.

As Tom started to compose a message. Bud, who was looking through a porthole, gave a hoarse shout. "A meteor!" he yelled. "A giant meteorIt's headed straight for us!"

"The Comet Catcher must be out of commission!" Tom gasped. "Hit the deck!"

A terrific crash rocked the space station as the meteor struck it a glancing blow before deflecting into space. Tom rose and watched the others get to their feet.

"We're lucky no one got hurt," he said. "Let's find out what happened to the Comet Catcher."

He and Bud rounded up workmen to make a check inside the station, and found a malfunction in the repelatron system.

"The meteor must have hit this brace," Bud stated.

Tom surveyed the twisted metal. "You're right, Bud. It's been jammed against this other one, neutralizing the power.No wonder the net wouldn't open. We can fix it easily. Hand me that electronic crowbar."

Tom forced the bar under the damaged brace and injected a burst of electricity. The pressure drove the strut back to normal position.

Tom turned off the juice. "Now the net will operate," he told the work crew, "but we'll have to replace that repelatron." He pointed. "Just prop it up until we can finish the job."

Bud asked, "What about the station's hull, Tom? I know it's made of Tomasite, but it took a tremendous wallop from that meteor. Think the hull might have cracked under the impact?"

"We can't take any chances, even with Tomasite," Tom replied. "I'll go out and look."

He donned a space suit made of wire fiber and coated with a layer of synthetic rubber. A zippered hood and goggles protected his face. With a good flow of oxygen, the suit guaranteed survival in space for several hours. Communication was maintained by means of a transiphone in the helmet.

Tom shuffled along a dimly lighted gangway and edged through a porthole on the "rim" of the space station "wheel." He began to clamber over the hull, using a long pole with a hook on the end to probe for breaks in the superplastic.

"Terrific!" he told himself after a thorough inspection. "That meteorite left us with a paint job to do, but thank goodness there are no cracks. Dad's Tomasite is really something!"

Before going inside, Tom paused for a look around. Out of the starry background a silvery shape emerged—a rocket ship whizzing toward the space station. It was on a collision course!

Quickly Tom radioed a warning, "Veer off!"

Back came the chilling reply, "Out of control!"

Frantically Tom contacted Bud and told him to trigger the Comet Catcher into action. As the ship was about to plunge head-on into the station, the net swept upward and caught the rocket.

At the same instant the net brushed Tom from the hull. He began to float off helplessly into space!

CHAPTER II

BEWARE!

BY twisting, turning, and somersaulting Tom managed to change his course and get near the Comet Catcher. Desperately he flailed upward with his pole. The curved hook at the end whipped into the netting and caught fast.

"I'd better not lose my grip!" Tom clenched his teeth as the net swept him up.

A wide Tomasite panel in the hull of the space station rolled back noiselessly. Both Tom and the strange rocket ship were carried into the catch-hatch and deposited in the receiving hangar. The panel slipped automatically into place.

"Tom, are you hurt?" Bud asked fearfully as his friend climbed out of his heavy suit.

"I'm okay," he told Bud, who had watched the drama from the interior of the hangar. "But I'll tell you one thing. I'm not eager to give a repeat performance of Tom Swift's death-defying trapeze act in outer space!"

"We were just about to send the Spider-Crab out after you," said Bud, "when you managed to hook the net."

At that moment a hatch in the visitors' spaceship swung open and a crew of rough-looking men emerged. Throwing curious glances around the hangar, they descended the steps and gathered at the bottom.

Their captain came forward, clicked his heels, and saluted smartly. He was a stocky individual with a heavy black beard. His piercing eyes reminded Bud of a lynx on the prowl.

"My name is Igor Svornin," said the spaceship commander in English tinged with a slight accent.

"What do you want?" Tom asked.

"Your hospitality! We have suffered a malfunction in our rocket control system. This space station was nearby when the unfortunate accident occurred, so I ordered my navigator to head here. We will leave as soon as we have made the necessary repairs."

Something in the man's demeanor made Bud suspicious. He challenged the captain with a single word.

"Nationality?"

"Brungarian!"

Tom was thunderstruck. Brungaria was a hostile tile nation that had tried many times to foil his plans and steal his inventions.

"Still," he thought, "we can't turn stranded astronauts away, not even Brungarians!"

He courteously offered Svornin and the Brungarian crew the hospitality of the space station's bunks and

mess hall long enough to repair their rocket.

Bud frowned and whispered, "Aren't you taking a chance letting those Brungarian birds fly loose in our coop?"

Tom shook his head. "We'll have them under close surveillance while they're here."

"I'll keep an eye on this crew by helping them repair the ship's rocket control system," Bud offered. "Assuming," he added, "that it needs repairing."

"Good idea, fly-boy," Tom answered. "You'll soon find out whether they had a legitimate excuse for almost pulverizing us. I'll join Dad in the observatory and see if we can get a rise out of our space friends."

As Tom entered, Mr. Swift remarked, "Nothing on the oscilloscope yet. While we're waiting let's check these meteor fragments the Spider-Crab brought in."

He put several pieces of rock under an atomic spectroscope. It revealed some odd radiation patterns that stirred Tom's interest.

"I wonder if it has something to do with the P-E. That's my shorthand for Photo-Essence—the ghosts," he explained.

"It could be that the ghosts of Saturn's moon emit subatomic beams we haven't discovered yet," Mr. Swift agreed. "Don't stay up too late. I'll say good night now."

Alone in the observatory, Tom turned the megascope space prober on the P-E. The pulsating colored spots had moved outward from Mimas!

"They've reached Phoebe, the outermost Saturnian moon!" Tom muttered. "Those are faint radio waves they're emitting. What are the ghosts? And what do they want?"

Seizing a large notebook, he marked the title page Ghost Log and started making notes. Suddenly the oscilloscope sprang to life with a succession of green symbols. The space friends were sending him a message!

A small circle appeared on the screen, followed by a large one. Thencame a series of interlocking triangles and a complex set of mathematical equations.

Tom had mastered most of their combinations, but a few were unfamiliar. He flipped open his father's space dictionary and looked them up. Finally he decoded the message:

BEWARE GHOSTS!

Startled by the message, Tom used the intercom to summon his father and Bud. The three gathered around the oscilloscope while more symbols flashed on the screen.

The space friends reported that the ghosts were a super-powerful force. Two earth weeks ago near Uranus ghosts ambushed our space expedition. Everyone killed.

"Interplanetary aggressors!" Bud gasped. "Maybe they consider Uranus their territory!"

"But why should they have moved to Saturn?" Tom was puzzled. "Wait a minute. Here are more messages."

Green signals flashed again with the message: No further contact with ghosts. They come from another galaxy. Plan to invade your solar system.

Again there was silence. Tom sent a return message by special high-power transmitter, asking what his space friends intended to do.

Nothing now, came the reply. Must build up forces after ambush near Uranus.

"Wow!" Bud exclaimed. "If the space people don't know who the ghosts are, how are we going to find out?"

"Sounds very sinister," Mr. Swift commented. "Evidently these creatures have the ability to move at will between galaxies. Who knows where they will stop?"

Tom stood up. "I'm going to try for a fix on the P-E from here," he announced. "We have our telesampler and the X-raser for long-distance contact."

The telesampler could beam back specimens for analysis by a Swift mass spectrometer. The X-raser combined both operations. This time, to Tom's disappointment, these two inventions failed to reveal anything.

"The ghosts are elusive little critters," he said. "I'd better perfect my new Transmittaton as soon as possible."

"Yourwhat?" Bud queried.

Tom explained, "It's a method for transporting objects from wherever they are to wherever we are. The Lektromag beam director and ranger on it homes in on target, atomizes it, and returns the atoms along a radio beam."

Mr. Swift added, "It's a new form of electromagnetic conduction."

Bud scratched his head. "What happens when the stream of matter gets here? Any chance of us getting conked on the head?"

Tom chuckled. "No. The receiving tank where the atoms are put together again will be made of Tomasite. That's strong enough to hold anything we capture."

"The Transmittaton will solve some of our old transportation problems," Tom pointed out. "For instance, we set one up on our spacestation, point it at a cargo on earth, and presto!here comes the cargo in a stream of particles ready for reassembly in our receiving tank."

"Not for me," Bud remarked.

"What's the matter?" Tom kidded his pal. "Afraid the gadget will put you hot pilots out of business?"

"Not a chance," Bud retorted. "I just can't see people lettingthemselves be atomized so they can ride an

electromagnetic beam! We'll always have passengers who prefer a rocket ride intact."

"By the way, Bud, how are the Brungarian visitors doing?" Tom asked.

"I've a hunch they're up to something. They won't let me get within a foot of their rocket, and yet they're banging so loudly you'd think they were tearing their ship to pieces. Fake repair work, if you ask me!"

"You mean they pretended to be out of control so they could get into our space station?"

Bud nodded. "Captain Svornin knows a space station has to help a rocket ship that's in trouble. He was sure we wouldn't refuse him."

Tom looked doubtful. "Think of the chance Svornin took. He almost plowed his ship into our hull! We might be picking up the pieces with a magnet!"

"I don't think he was worried about that," Bud replied. "Your Comet Catcher has received a lot of publicity, Tom. Svornin took a calculated risk that it would snare his rocket like a left fielder going after a fly ball. He could count on a free ride into the Swift space station, courtesy of Tom Swift!"

You're probably right, Bud. The Brungarians couldn't have realized we were wrestling with a defective repelatron. They'll never know how lucky they were!"

As Bud nodded in agreement, hoarse shouts broke out in the corridor. The Brungarians were yelling, "Fire! Fire!" Someone screamed, "Our rocket ship is going up in flames!"

The Swifts and Bud dashed out of the observatory. A cloud of acrid smoke filled the corridor. The three joined the station's fire-fighting unit running toward the hangar.

Black smoke was seeping from the Brungarian spaceship. Members of the crew were hastily shutting portholes and doors, and squirting atomized liquid foam through the hatches. The men of the space station sprang into action in an effort to control the blaze.

"Where's Captain Svornin?" Mr. Swift called out as he reached the scene.

"I haven't seen him," one of the Swifts' fire fighters responded.

"Is he in the spaceship?" Bud demanded of a Brungarian crewman.

The man shrugged as if he did not understand English. Bud felt sure he was merely pretending.

Tom had a hunch. The Brungarian skipper should have been the first to rush up at the cry that his ship was on fire. Yet Svornin was not in sight.

"Was the fire a ruse to get me away from the observatory?" Tom asked himself. "Suppose my ghost log should get into enemy hands?"

The young inventor hastily left the hangar and raced to the observatory. As he dashed through the open door, a hulking body leaped from behind it, knocking him over. He and his assailant went down in a tangle of arms and legs!

CHAPTER III RETURN TO THE ICE AGE

INSTANTLY Tom broke free and landed a hard blow on his assailant's jaw. The man collided with the base of the oscilloscope, and slid down into a sitting position on the floor.

"Captain Svornin!" Tom exclaimed. "What are you doing in my observatory?"

The Brungarian slowly stood up. "I came here looking for you," he mumbled. "When I heard running footsteps along the corridor, I thought it was someone about to attack me. I am sorry that I made a mistake."

As Tom started to say the story sounded fishy, Bud entered the room. "The fire's out in the spaceship. Very little damage," he reported. Seeing Svornin, he added, "Everything's ready for lift-off. Captain."

"I am very happy to hear it," said the Brungarian, heading for the door.

"Wait a moment!" Tom commanded. "My ghost log is missing! So are the meteor fragments! You must have taken them! Hand them over!"

"I do not know what you are talking about!" Svornin growled.

"Oh no?" Bud countered, moving toward him.

Quick as a wink, Svornin plunged forward. Seizing Bud's wrist, he gave a judo twist that slammed Bud into Tom, knocking the boys to the floor. Svornin dashed out of the observatory and pulled the door shut behind him.

Bud jumped nimbly to the door and wrenched at the knob. "Locked!" he fumed.

Tom ran over to the intercom to sound the alarm. After jiggling the hook a few times and getting no reply, he gave up.

"It's out of commission. Bud. Svornin must have sabotaged the mechanism. We'll have to break the door down before the Brungarians get away!"

Both Tom and Bud threw their weight against the metal barrier until it came loose from the hinges. The boys ran to the hangar. The Brungarian rocket ship was just leaving, its silvery nose pointing toward outer space.

"Too late!" Tom groaned.

"It's my fault, Tom! If I had been alert that guy wouldn't have got a judo grip on me! Maybe the Brungarians won't be able to decipher the ghost log or analyze the rocks."

"Anyway," said Tom, "we know they're interested in the P-E. Probably they spotted the ghosts through a high-powered telescope or picked up their radio emissions. Svornin and his gang were sent here to find out what we know about the ghosts."

"And to steal anything they could," Bud added.

He and the Swifts returned to earth the next day. After landing atFearingIsland, they flew to Enterprises and drove to the Swift home to dinner.

They were greeted at the door by Tom's mother, an attractive, dainty woman who took a deep interest in the inventions dreamed up by the men of the family. She confessed, however, that she did not understand much of the scientific principles involved.

Two attractive girls came out of the living room and into the hall.

"Hi,Sandy!" Bud called to Tom's seventeen-year-old sister, Sandra, who was his usual date. Blond, blue-eyedSandywas the outdoor type. Her father and brother had taught her to fly jets like a veteran. I

"Hi, Phyl!" Tom called to Phyllis Newton, the daughter of Ned Newton, financial manager of the Swift Construction Company. Dark-haired Phyl accompanied Tom whenever the couple went out as a foursome. She and Sandy were close friends.

A surprise guest came forward to shake hands. He was James Wooster, an official from Washington and an old friend of Mr. Swift.

"I phoned this morning," he explained. "Mrs. Swift said you'd be returning from the space station in time for dinner and invited me to join you. I'm here on business as well as pleasure," he added.

After a delicious meal the men went into the living room for a conference.

"This is a top-secret mission," Woosterannounced. "We want you Swifts and Bud to take a special assignment inChile, one involving danger as well as diplomacy."

"I'm not sure I can go," Mr. Swift said. "But I think you've told us enough to interest Tom and Bud."

"What kind of assignment is it, Mr.Wooster?" Tom asked.

"Well, this concerns a mastodon."

Bud grinned. "You mean one of those outsize elephants that lived in prehistoric times?"

"That's right," the Washington official said. "It so happens that in the Americasthe mastodons survived until the arrival of the Indians, who became great mastodon hunters."

"Not long ago a perfectly preserved mastodon was discovered inChile. I don't have to tell you this is a unique specimen and nearly priceless as a relic of the Ice Age. We want it in theUnited Statesso scientists can study it for clues to ancient times. The Chilean government has agreed to sell it."

"We must have offered a fortune," Mr. Swift mused.

"Yes, indeed,"Woosterreplied. "And the money is earmarked to raise the standard of living of poor people inChile. Both nations will gain from this particular transaction."

Tom was becoming more and more excited, "What do you want us to do, Mr. Wooster?"

"Your job will be to find the mastodon and transport it to a university on the West Coast where it will be placed in a museum."

"That seems reasonably easy," Bud remarked,

"It would be," said Mr. Wooster, "except for two complications. First, the mastodon is frozen into a pit of ice inside a cave, high in the snow-coveredAndes. Breaking or melting the ice with vibrating machinery might start an avalanche hurtling down on a village at the foot of the mountain. We hope you can come up with a plan to prevent such a tragedy."

"That is a problem," Tom admitted. "It sounds tough enough by itself. But what's the second complication?"

Woosterfrowned. "An Indian who lives in the village discovered the relic. His neighbors are hostile to the whole idea of removing the mastodon. They don't want anyone else to know where the cave is. They've even refused to guide Chilean engineers to the site for an inspection. Quite an ugly situation has developed."

Woosterwent on to say that the Indians had seen eerie blue flames playing around the high peak. They interpreted this weird phenomenon as a warning from the mountain spirits to leave the frozen relic of the Ice Age where it is.

"Besides, some Indians claim to have seen a fearsome white giant roaming near the cave."

"Another Abominable Snowman!"Tom exclaimed with mounting excitement."Like the reputed Himalayan yeti inTibet."

"If you can solve that mystery, Tom, you may find you've unearthed a lead to the location of the mastodon,"Woostersaid.

"You mean," Tom replied, "that if I can convince the Indians there are no angry mountain spirits guarding the cave, they'll show us where the mastodon is, and let us remove it?"

"Precisely."

"What do you think, Tom?" Mr. Swift queried.

"I'd like to take this job. Dad, but my work on the Transmittaton won't wait."

His father offered to carry on the Transmittaton experiments, and Tom agreed to try to remove the mastodon.

Tom remarked, "Carting a mastodon from Chilewon't be easy. But suppose we can atomize the beast and let it ride an electronic beam to the university for reassembly !"

"That calls for a king-size receiving tank," Mr. Swift commented. "I'd better solve that problem before you two fellows produce a mastodon with no place to go!"

Bud chuckled. "It might be interesting if Tom reassembled the beast from the Ice Age in the university dean's office. How about it?"

"The dean can rest easy." Tom laughed. "Even the animal's two fourteen-foot tusks wouldn't get in that room, to say nothing of its big body."

Mr. Swift smiled, then became serious. "I'll make arrangements with the university tomorrow. A team of Swift scientists will start for the West Coast to begin work setting up the project."

"Suppose the Transmittaton doesn't work,"Woosterasked.

Tom grinned broadly and replied, "With Dad on the experiments, it's bound to. Besides, we have some earlier inventions to fall back on. If it's question of cutting an ice block with the mastodon inside, the X-raser will do the trick. As to transportation, I'll order the Sky Queen to stand by."

This huge craft was the remarkable Flying Lab Tom had devised to carry out experiments in the ionosphere. A triple-decker plane powered by atomic nuclear reactor engines, it was equipped with radar, power units, experimental labs, and large storage holds.

"That sounds fine to me,"Woostersaid. "Good luck!" He obviously felt encouraged about the success of the project. He put on his coat and left the Swift home.

"How about it, Bud?"Tom joked."Ready for a trip back to the Ice Age?"

"Wouldn't miss it for all the mastodons inChile!" his friend retorted.

The telephone rang in the hall. "For you, Tom," Sandycalled. "Harlan Ames says it's important."

Harlan Ames was head of the Security Department at Swift Enterprises.

"What's up, Harlan?" Tom asked.

Ames's voice sounded as if he were under a strain. "We've just received another report from the space station."

"What is it?"

"Ghosts now on Jupiter!"

CHAPTER IV

KIDNAPPED BY A SNOWMAN

A cold chill ran down Tom's spine. Could the ghosts be planet-hopping toward earth? "From Saturn to Jupiter is a big step in our direction," he thought, hanging up the phone. "Now we have only Mars between them and us!"

He consulted his father, who agreed to get in touch with their secret contact inWashington. Tom, though deeply disturbed byAmes's information, felt his personal promise to retrieve the mastodon for theUnited Statesgovernment should not be broken. He joined Bud. The boys hastened to Tom's room, where they packed for their trip toChile. Although Bud did not live at the Swifts' home, he always kept some clothes there.

The girls watched from the doorway. "How come you're going off by yourselves?" Sandyasked.

"You never take us any more," Phyl chimed in.

Tom and Bud looked at each other sheepishly. "Okay, girls, we agree," Tom said. "But this time it's legit. We must go alone."

Bud added, "But we'll take you out soon."

The two youths drove to Swift Enterprises in Bud's red convertible, spent the night in Tom's private suite adjoining his lab, and rose before dawn. A familiar voice greeted them as they entered the small dining room.

"Wal, I'll be a horned toad, if it ain't my old buddies back on this here range! What kin I do for you broncobusters?"

Tom grinned. "How about some of your choicest cement biscuits. Chow?"

"And a little of that coffee-stained water you perk," Bud kidded.

Charles "Chow" Winkler was a former chuckwagon cook from the Texas Panhandle. He had met the Swifts while they were doing atomic research in theLoneStarState, and they had persuaded him to come North with them. A pudgy, balding, bowlegged, happy-go-lucky character, Chow was the Swifts' private chef at Enterprises and frequently went on scientific expeditions with them.

"Boys, them would be fightin' words where I come from," he answered, "but I cain't reach for my six-gun when there's a mess o' havg on the fire."

Bud gulped. "At this time of the morning?"

"Yup! It's my new system—making use o' leftovers. You varmints have a try before turnin' up your noses."

After sampling Chow's fare, Tom confessed, "Not bad." Bud agreed. Between them, the boys ate everything the cook served.

Dawn was breaking when Tom and Bud boarded a small jet for their flight toSantiago,Chile. When the boys landed outside the city that afternoon, they were met by their contact, a sturdy, suntanned man, wearing a white suit and Panama hat.

"I'm John Burkart," he introduced himself. "Estate manager for Femando Castilla. He is one of Chile's leading orange growers. You will stay at his hacienda."

The boys crowded into the front seat of his car and Burkart drove about a hundred miles from the airport to the foothills of theAndes.

"What a magnificent spot!" Tom exclaimed.

Snow-capped mountains rose above the miles of orange groves that surrounded the Spanish-type, one-story villa. Behind the house lay a group of low, tile-roofed outbuildings including a stable and garage.

The owner of the estate greeted them affably. Fernando Castilla was tall and distinguished-looking. A heavy black beard covered half ruddy face. He said that two Chilean engineers were staying at the hacienda.

"They came to inspect the mastodon cave, but the Indians won't let them get near it. I hope you Norteamericanos can find the snowman and solve the mystery of the blue fire!"

"Where is the cave, Senor Castilla?" Tom asked.

"I do not know."

"Nor do I," Burkart said. "The local people won't tell us. However, the Indian who discovered the cave has volunteered to show us the way. His name is Juan Alvarez. He's waiting for us in the village. Shall we drive there at once?"

"Let's go!" Bud urged.

With Burkart driving, they soon reached a large cluster of adobe dwellings. Burkart parked the car under a tree and led the way down a narrow muddy road to a small house with a red-tiled roof. He knocked several times, but there was no response. Burkart went inside but soon returned.

"Alvarez has disappeared!" he exclaimed.

"Maybe there's the explanation," Tom suggested with suppressed excitement. He pointed to giant footprints in the mud, leading up to the house. Another set of prints led away from the house toward the mountains.

"You mean," said Bud, "that Alvarez may have been kidnapped by the snowman?"

By now a group of terrified neighbors had gathered at the Alvarez home. They jabbered excitedly in Spanish.

"We heard him scream during the night!" one declared.

"The giant came and took him!" a second cried in a trembling voice. "The snowman-last survivor of a

race of giants who inhabited this land in ancient times!"

The rest of the villagers chorused their fears in loud tones. They showed by their scowls that they would not let the mountain spirits be offended any more.

"Nothing to be learned here," Burkart commented in a low voice. "Let's go back to the hacienda before we get into trouble."

The two Chilean engineers came in just before eight o'clock. They were introduced as Senor Querido and Senor Vanegas. The two had spent the day searching for the mastodon cave. The result was complete failure. Both looked grave when they heard the news of Juan Alvarez's disappearance.

"We must try to find him," said Senor Castilla. "I hope he is still alive." During dinner their host briefed the boys on the background of the mastodon mystery.

"When word got out that the prehistoric elephant had been found by an Indian hunting mountain sheep, the Chilean government received a bid for it from another country."

"Brungaria?" Tom inquired.

"My young friend, you have guessed correctly," the orange grower replied. "But the Brungarians did not offer a fair price. Hence the decision of my country to sell to theUnited States."

Castilla looked thoughtful. "I do not believe the Brungarians were sincere in their offer. They wanted to find out where the mastodon was and prevent the Americans from having it."

"Could they be behind the strange blue fire in the mountains?" Bud wondered.

"And the giant snowman?" Tom added.

"Very likely," their host replied. "When they learned that the Indians had discovered the cave, they devised a method to frighten them away. The Brungarians probably sent the snowman to kidnap Alvarez when they learned he was about to show you the cave."

Tom mulled over this. "Of course," he pointed out, "the Brungarians may have found the cave themselves. So not only would they want to stop us from getting it, but they may be planning to steal the mastodon!"

The others around the table stared at the young inventor incredulously, and Castilla asked, "But how?"

"I know the Brungarians," Tom continued. "They'll stop at nothing! They wouldn't hesitate to melt the ice just to get the mastodon!"

"But that could trigger an avalanche!" Castilla shuddered. "Imagine a river of ice rolling over our village at the foot of the mountain! Such a catastrophe must be prevented! But how?"

"We'll get there first!" Bud declared.

"And find the cave and remove the mastodon safely," Tom stated.

As Tom and Bud were preparing for bed, a servant knocked on their door and said the young inventor

was wanted in the radio room. Castilla, a ham radio enthusiast, maintained a station that could pick up messages from around the world. The call was from Swift Enterprises. Castilla handed Tom a slip of paper with the message:

Ghosts now on Mars! Come home tomorrow for consultation.

Tom returned to the bedroom and showed the message to Bud.

"Ghosts on Mars! A mastodon in an unknown cave! What a combo, Tom!"

"The situation is becoming desperate, Bud! The Photo-Essence is closing in on earth! They're practically on our doorstep!"

"Isn't there something we can do?" Bud asked.

"I'll have to find some way of communicating with these invaders," Tom explained. "I still don't know what they're made of. Are they intelligent?"

Bud climbed into bed. "They might be a threat to us whether they're intelligent or not. Look at what happened to our space friends on Uranus," he observed as he turned off the light.

Tom nodded. "They could be dangerous to life on earth. Bud, I can't sit by and let the P-E move in! Humanity might be wiped out!"

"That thought gives me nightmares!" his pal admitted. "I agree we must do something to head them off!"

Bud went to sleep, but Tom returned to Senor Castilla and asked to send a message to Mr. Swift. He requested that his father try contacting the ghosts with the same symbols he used for his space friends.

By morning he had an answer: No sign that the ghosts understood us.

"I'll think up something else," Tom decided.

Senor Castilla was in a highly nervous state. "I slept hardly any last night," he said. "And this morning an official of the Chilean government phoned fromSantiago. He said that the men in our intelligence bureau are so worried, they're asking your help to get to the bottom of these frightening events around here."

Burkart spoke up. "The Alvarez family is pinning its faith on your ability to find Juan. They feel that perhaps the famous Norteamericanos can bring him home safely."

"I, too, beg you," Castilla continued. "My orange-growing business is being harmed. Workers aren't showing up. I am most upset because the people of the village are so disturbed. I hope you can dispel their fears!"!

"We'll do our best, Senor Castilla," Tom promised. "There has to be an explanation for everything that has happened."

"Right now," said Bud, "it looks like a jigsaw puzzle, but don't worry, senor. Tom Swift is the world's number one expert to fit the pieces together!"

Tom modestly denied this. Then he announced that the boys must return home. "But we'll be back

soon."

Burkart drove Tom and Bud toSantiago. He dropped them in the heart of the city instead of the airport because Tom and Bud wanted to sample some typical Chilean cooking. They found a table at an outdoor restaurant and soon were eating the specialities of the house.

"This was worth a flight toSouth America," Tom remarked, opening a succulent shellfish with the twist of a knife.

"You said it," Bud agreed after sampling luscious Chilean fruit salad.

An Indian in a sombrero, with a bright-colored manta draped across one shoulder, walked from his table toward the exit. He jostled their table with his elbow in passing.

"What's --?" Bud began.

"Look!" Tom interrupted him, pointing.

On the table lay a beautiful crimson flower, its petals forming a delicate cup. It gleamed in the sunlight. Tom and Bud recognized the copihue blossom, Chile's national flower, which they had seen growing luxuriantly by the side of the roads and in the mountains.

This one had a note fastened to its long stem. Tom detached the paper and flattened it on the table. Two words were written on it. Tom read them aloud:

"Alvarez-Valdivia!"

"Who, or what, isValdivia?" Bud asked.

"We'd better ask our messenger!" Tom replied.

They quickly paid the bill and hurried from the restaurant. They were just in time to see the Indian disappear into a crowd down the street. He was walking toward one of the busy boulevards of Santiago.

"We can head him off!" Tom said, dashing forward. Bud followed.

They elbowed their way past pedestrians, straining their eyes to keep the man in sight. As the boys stepped off a curb into the traffic, they heard a blare of horns, screams, and warning shouts.

A speeding car was barreling directly at them!

CHAPTER V THE HOT ROCK

TOM and Bud threw themselves to one side. The car careened past, missing them by inches! Some pedestrians began to criticize the young Americans for their carelessness. ASantiagopoliceman stopped the boys to warn them about crossing streets against the traffic lights. Meanwhile, the Indian who had dropped the copihue flower on their table had vanished.

Bud was apologizing to the policeman when Tom had an inspiration. "Officer," he said "where can we findValdivia?"

"Senor, that is about four hundred miles south of here. We call it the Venice of Chile."

"SoValdiviais a city," Bud commented when they were alone.

"I'll bet that message meant Alvarez is being held prisoner down there!" Tom exclaimed.

They caught a taxi to the airport and flew their jet toValdivia. The city spread out under their wings around the juncture of two rivers near the Pacific. Swampy bayous extended on either side. It had been raining hard, but now the sun was shining. Many boats, laden with produce of all kinds, were tied up at the wharves. They formed a busy waterfront market. Coming in low, the boys could see the colorful array of fruits, vegetables, and flowers. In one boat they spotted copihue blooms.

"No wonder they callValdiviathe Venice of Chile," Bud remarked.

After receiving landing instructions from the control tower, Tom maneuvered the jet down smoothly. The boys separated to broaden their search for Alvarez. It was agreed they would meet in three hours at the airport.

The time was nearly up when Tom, scouting the waterfront, heard a voice call, "Swift?"

Turning, he saw a young boy holding half a brown prickly sphere which looked something like a coconut. As Tom watched, the boy dipped his fingers into the cavity and then put the meat in his mouth.

"Best way to eat a sea urchin, isn't it?" Tom asked in Spanish. "Well, you have my name right. What happens next?"

The boy gestured for him to follow and led Tom to a boat with red, pink, and white copihue flowers on the deck. He pointed to the door of a low cabin. Tom knocked. Getting no answer, he pushed the door open, entered, and found himself alone. The door swung shut behind him. A bolt slammed into place. Tom was locked in!

The boat rocked slightly, and he knew someone had stepped aboard. He heard the boy say in Spanish, "I have caught Swift. It was easy. I recognized him from the picture."

A man replied, "Well done. Here's your money." The boy ran off, whistling gaily.

Another voice asked what was to be done with the captive. The first man replied, "The Tall One will decide that when he finishes in the mountain cave. Who knows? Perhaps he will take Swift to his country."

Tom considered these scraps of conversation. "The Tall One must be a Brungarian who is after the

mastodon," he thought. "But how did he know I was inChile? Brungarian spies must have done a slick job of espionage!"

The man called out "Swift!" several times. Tom remained silent. "Could that boy have cheated me?" the man muttered. "I had better see with my own eyes that he trapped Swift!"

The bolt slipped back. Setting himself in a football stance, Tom waited for the door to open. Then he powered his way through, jarring aside the man who was bending forward for a look into the cabin. The other man stood beside him. Both grabbed Tom, but he broke their grip and jumped from the deck to the wharf where the market-day crowd offered him cover.

"Officer," Tom gasped to the first policeman he met, "I want to report an attempted kidnapping." Rapidly he filled in the details.

The two hurried back to the scene, only to find that the boat was gone. The policeman led Tom to headquarters so he could file a complaint.

Bud was there. He had already reported Tom missing. When the two emerged from the police station, rain was falling heavily.

"TheVeniceofChile?" Bud joked. "I'd say it's more like therain forestofChile! We seem to have reached Valdiviajust in time for the monsoon!"

"Moral-departpronto for a drier climate," Tom replied. "Alvarez doesn't seem to be here."

The boys taxied to the airport and took off in their jet for theUnited States. En route, the radio crackled. Mr. Swift had a message for them:

Report to my office as soon us you land at Enterprises. I have important information for you!

When Tom and Bud walked into his office, Mr. Swift said, "First of all, about the Transmittaton. I've added a compact megascope space prober to the unit you built, Tom."

"Then the Transmittaton is ready for testing on space objects?" Tom asked.

"Yes. But something else is bothering me."

"What's that, Mr. Swift?" Bud queried.

"Shortly before I radioed you two boys, Phil Radnor and his men caught a couple of Brungarian spies on the grounds!"

Phil Radnor was second-in-command to Harlan Ames, the chief security police officer at Enterprises and Fearing. He had charge of guarding both complexes to keep unauthorized persons from snooping around. Many people were interested in the Swifts' inventions, and enemy agents were constantly trying to steal the secrets locked in their files.

"Are we dead sure they're Brungarians?" Tom wanted to know.

"The identification is positive," his father replied. "Phil had a dossier on both of them, including photos. He caught them red-handed in your lab." "Does Phil know what they were after?"

"Yes. He found incriminating evidence on them. In code."

Mr. Swift clasped his hands, placed his elbows on the desk, and looked soberly at the two boys who waited tensely to hear the rest.

"Tom, Bud, this is a real shocker! These Brungarian agents were sent here to steal a sample of the galaxy ghosts. The head men of Brungaria plan to use the ghostly material as a super-weapon."

Tom gasped. "Then Svornin accomplished his mission! He delivered my ghost log and the radioactive meteorite fragments from our space station to Brungaria. Their scientists no doubt have figured out the destructive potential of the Photo-Essence."

Mr. Swift nodded grimly. "That's about the size of it. The word is out. Several nations are in a panic. Their heads of state have been in touch withWashington, insisting that we make every effort to stop the Photo-Essence from coming any closer to earth. Also, they want you to foil the Brungarians before there's a world catastrophe!"

Tom whistled. "That's a tall order. Dad! I just hope I can do the job. I'll certainly give it a grand try. How about you. Bud?"

"I'm with you all the way, Tom! What's our first move?"

"Get ready for a space voyage, pal," said Tom. "You and I are going to find the galaxy ghosts!"

"We'll take the Transmittaton," Tom continued, "and see if we can latch on to a sample of the P-E. The Cosmotron Express will zip us to Mars, but we'll have plenty of time to prove out our gadget."

"I get it!" Bud answered. "If the experiment is successful, we'll accomplish two things at once. Prove that the Transmittaton can do everything it should, and bag a ghost at the same time!"

With Chow aboard to cook the meals, Tom and Bud took off early the next morning. The Cosmotron lifted off by means of its repelatron drive system and quickly gained speed.

"Wal," Chow opined, "this is smooth enough so a buckaroo could eat his soup without spillin' a drop!" He went to the galley.

The boys donned antiradiation suits to protect themselves from possible contamination while using the Transmittaton.

Tom sighted through the megascope space prober, zeroing in on the surface of Mars. It was rapidly growing larger as the Cosmotron Express whizzed toward the Red Planet of the solar system.

"Okay, Bud, brace yourself," Tom warned. "Here goes! I'm aiming at a big Martian rock!"

He pressed the Lektromag button. The needle revolved around the dial. A strange humming noise began, rose to a crescendo, and then died away.

Tom looked tense. "I think we have Martian rock atoms in our receiving tank. Push that lever, Bud.

We'll see if the rock materializes!"

A grinding sound followed as if stones were being pressed together. A chunk of rock appeared in the Tomasite container! Tom breathed easier. Bud gave a yell of triumph. The Transmittaton had worked!

"Tom, you did it!Congratulations, pal!"

"Thanks, Bud. Now let's find those ghosts!"

A minute inspection of the Martian area through the megascope failed to locate any of the mysterious Photo-Essence.

"Maybe the ghosts have retreated to their own galaxy," Bud observed in disappointment.

"Could be. But look at those meteors up ahead, Bud. They're peculiar. I'll try for a sample."

Again Tom used the Lektromag. A piece of one meteor materialized in the receiving tank. Bud read off the numbers on the radiation dials.

Tom wrote the figures in his notebook and made some rapid calculations. "These are the same subatomic waves as those fragments we tested at the space station. Only they're much stronger. Maybe the ghosts are infecting our solar system with their radiation!"

Before Bud could reply, an electronic unit exploded, knocking the receiving tank off the table. The lid snapped open. The rock flew out into the lab.

Wave after wave of intense burning radiation, bounced across the floor and onto a Tomasite table. It lay there, sizzling! Tom and Bud staggered back, blinded by the glare!

CHAPTER VI

PLANETARY PURSUIT

TOM quickly seized a long-handled Tomasite scoop from among other scientific equipment hanging on the wall.

Turning his eyes away from the radiation, he juggled the rock back into the Tomasite container. Bud snapped down the lid. The glare ceased.

"Wow, am I glad we have Dad's Tomasite plastic!" Tom gasped. "It really controls that energy!"

"And your Atomeron isn't bad, either!" Bud replied. "If the floor weren't made of Atomeron, that hot rock would have burned a hole clear through to outer space!"

Atomeron was a nearly indestructible alloy Tom had discovered inNew Guineawhile experimenting with his ultrasonic cycloplane.

The young inventor rubbed his forehead reflectively. "Bud, we must run down the source of this devastating radiation. It's my guess that the Photo-Essence is causing it. We must flush them out wherever they are!"

Bud turned the nose of the Cosmotron Express away from the sun. The rocket ship flashed onward, accelerating as it zipped past the outer planets. Tom manned the Transmittaton, ready to zero in the moment he spotted the ghosts through the megascope.

"No luck!" he complained as the Cosmotron Express made a big circle around Pluto and headed back toward earth. "Our planetary search hasn't turned up a sign of the P-E!"

Chow had just come into Central Control with a tray of cocoa and sandwiches. "Good riddance to 'em! They're a consarned bunch o' claim jumpers, comin' into our solar system!"

Tom and Bud laughed. Bud brought the Cosmotron down for a nighttime landing atFearingIsland. Upon returning to Swift Enterprises the next morning, the boys had a conference with Mr. Swift. Tom said he wanted to move his base of operations toChile.

"We can build an underground lab out of pre-fabricated parts at the Castilla hacienda. I'll work on the P-E and mastodon mysteries there."

"And outsmart the Brungarians," Bud commented. "Make 'emthink you've given up Project Galaxy Ghosts. They'll think you're concentrating on Project Mastodon."

Mr. Swift agreed that the idea was a good one. Tom radioed Castilla and described the new plan. "It is our only chance to defeat the Brungarians," he added.

The next morning Tom rechecked the Transmittaton. "We can't take any chances with the potent forces we're up against," he told Bud. "I've asked our technicians to build a bonfire onFearingIslandand explained the reason. They're touching it off at this minute. I've repaired the receiving tank and we're ready for another test of transmission. Target—theFearingIslandfire."

He pressed the Lektromag button. Whoosh! Flames flashed up inches from Tom's face! Flinging up an arm to protect his eyes, he jumped back. Quickly Bud grabbed a fire extinguisher and doused the blaze.

"That came close to being Operation Singed Eyebrows!" Tom said with a wry grin. "The focusing equipment still isn't right. The quantity-control device may be out of kilter too. I'll have to go toFearing Islandand see how big a bonfire they lit. How about a trip out there after lunch?"

"Affirmative. Say, Tom, let's take Sandy and Phyl with us. We owe them a date, as they keep reminding us."

"That should get us back into their good graces," Tom replied. "And let's add as many of our Shopton gang as care to come along. We can make it a beach party."

Tom called the girls and some friends. All were enthusiastic about the idea. He asked Chow to prepare a picnic supper. The Texan reminded him about the policy of eating all the leftovers. "No problem,

buckaroo. I've got some cold mutton, an' slices o' hard cheese, an' a passel o' string beans---"

Bud interrupted him. "That's fine. Chow. But how about something a little more recent—like that boiled ham I saw you stash away in your refrig."

Chow's eyes twinkled. "That's my special fer tonight. But since you space buckaroos ain't gonna be here, I'll give you your share."

"Eight shares," Bud reminded the cook. "We'll have two extra girls and two extra guys. You wouldn't want them to go hungry, would you?"

Chow agreed he would not, and filled a basket with provisions for everyone.

Tom and Bud flew to Fearing Islandahead the others to inspect the debris of the bonfire "That was really something!" one technician said. "The fire vanished like magic right before our eyes!"

"You fellows obviously had a bigger one going than the focus control in my lab indicated," Tom replied. "The Transmittaton's quantity device needs adjusting too."

When the other young people arrived, Tom ordered the guard net around the island to be de-electrified. Then they all adjourned to the beach for their party. There was laughter and happy shouts as everyone raced through the sand and splashed into the water.

"Let's try an experiment!" Tom proposed.

"Trust my brother." Sandylaughed. "He always has something scientific on the brain."

"What is it, Tom?" Phyllis Newton asked. "Another invention?"

"Right, Phyl. It's my sonar pen, an instrument something like my pencil radio, only it works underwater. You can help me test it."

"What do I do?"

"Take this sonar pen and swim underwater to that rock over there. I'll walk in the opposite direction and call out something into a sonar pen I'm carrying. See if you can hear me before you come up for air."

Phyl hit the water in a clean dive. Giving a few kicks, she propelled herself toward the rock.

Standing on the beach, Tom shouted "Phyllis Newton!" at the top of his voice several times.

The swimmer surfaced at the rock, then swam back to her friends. "I could hear you faintly," she explained to Tom, "but I couldn't make out what you said."

Sandyspoke up. "If you couldn't understand your own name, Phyl, I'd say the sonar pen needs some fixing."

"Some other time," Bud urged. "I'd say now's the time for some grub."

Tom smiled. "O.K. The gadget can wait. Anyhow, I know the principle is correct. Is everybody out of the water?"

Sandycounted heads and announced all were present. Tom ordered the guard net to be electrified again, and the group gathered on the beach for a picnic in the moonlight. Chow's basket was opened and its delicious contents began to disappear at a rapid rate.

"Tom," one boy said between bites, "you seem to be on the move all the time. How come?"

"I think he has an itchy foot," said one of the girls.

"The penalty of success," sighed her partner. "What can you do when heads of state are begging you to save their countries?"

"What next, Tom?" came a fourth voice.

"Would you believe it?Santiago,Chile," Bud put in. "That's the next place on our timetable. We're leaving tomorrow evening."

He produced a guitar and began strumming. The young people joined in a lilting sing-along of popular tunes. During a lull the group was startled by a soft scurrying sound behind a nearby sand dune. The boys dashed toward the dune hoping to surprise whoever was there. The girls followed.

"Nobody here," Bud said. "It was the wind."

"No, somebody was here!" Tom exclaimed. He pointed to four depressions in the sand. "Those prints were made by a man kneeling right at this spot!"

"He must have been watching us," Sandysaid.

"But why?" Phyl inquired.

"That's what I aim to find out!" Tom sounded grim.

Angrily he summoned the security guards and demanded to know how a spy could have evaded the elaborate safety precautions.

"Did he sneak in while the guard net wasn't activated? Is he still on the island?" Tom fired a battery of questions at them.

His men at once started a massive search. A short time later they reported the result—no evidence of any unauthorized person onFearingIsland.

By now the beach party was breaking up. Bud piloted the jet plane that carried the group to Shopton.

Early the next morning Bud found Tom in his lab wrestling with an intricate panel system of batteries, wires, receivers, and monitoring devices.

"Radio?" Bud asked.

"Racodio," Tom replied. "You already know I've subjected most of the world's known languages to computer analysis based on the question: "How would you be able to decipher this language, if you didn't know it, and translate it into English?"

Using the principles derived from this analysis, Tom said he could program the computer to translate any new language.

"Racodio takes the method a step further," he went on. "The radio waves emitted by the galaxy ghosts have a pattern that looks like their own special form of communication. Dad and I have been working on our Racodio in the hope that it will analyze those radio waves and tell us what they mean."

"So you can communicate with the P-E!" Bud marveled. "We'll be able to say 'Hi! How are you?" when we finally catch up with them!"

"Whoa!" Tom chuckled. "You're moving too fast for me! I just hope we can tell them to make themselves scarce in a word or two. It'll be a while before we can do even that."

"Tom, do you think they know they're a great danger to us?" Bud asked.

Tom shrugged and went on, "The problem I'm working on now is programming the P-E radio waves into the Racodio for analysis and translation. Then we can speak their language!"

Tom was still hard at work on the Racodio several hours later when a lab technician walked over from a corner where he and some other experts had been repairing the Transmittaton.

"Tom," the technician reported, "we have the Transmittaton ready for you to test. We've worked over the focus and quantity controls as you directed. As far as we can tell, the machine is A-OK."

"Great!" Tom said. "How about giving me a hand on this tryout, Fred?"

"Sure thing."

Tom held up a mushroom. "I filched this from Chow's larder. Fred, suppose you take it to the top of Beaker Hill on the outskirts of town. Call me on your walkie-talkie when you've placed it right at the summit. Then I'll see if I can bring it back by Transmittaton."

The technician went off carrying the mushroom, and called fifteen minutes later to say it was on top of Beaker Hill. Tom pushed the Lektromag button. In a few moments the mushroom appeared in the receiving tank.

"It works!" he exulted.

Another mushroom appeared, then another.

"It works too well!" Bud shouted.

The three were followed by a flood of the fungi which cascaded into the machine and spilled out over the floor. Like a swiftly rising tide they inundated the lab.

"Turn it off!" Bud yelled. "Turn it off or we'll be broiled steak smothered with mushrooms!"

CHAPTER VII FOOLING THE ENEMY

WADING through a flood of mushrooms up to his armpits, Tom switched off the Transmittaton. The cascade stopped.

Tom and Bud gazed around in dismay. "The quantity-control device still needs to be worked over." The young inventor groaned. "It isn't functioning the way I planned! I expected to reassemble one object, not have it multiply!"

Bud flicked a mushroom from his shoulder. "You can say that again, genius boy. I'm glad the Transmittaton wasn't zeroed in on a rock canyon. We'd have been buried alive!" Bud exclaimed, then added, "I didn't know this was going to be a two-in-one invention."

"Neither didI," replied Tom. "Maybe I've stumbled upon something—mass production of almost anything! I'll have to work on that idea as soon as I have time."

The boys stared at each other a moment. Then the humor of the situation got to them and they burst into gales of laughter.

Bud wiped the tears from his eyes. "That pelting was faster than a computer can figure!"

Tom regained his composure. "Bud," he asked, "what are we going to do with all these mushrooms? We can't leave them here cluttering up the lab."

"Why not eat them, Tom? I'll tell you what. Phone Chow and tell him we have a few leftovers for him up here."

Chow was enthusiastic. "Leftover mushrooms? They're my specialty of the house, buckaroo! I kin use 'em in my omelets. Think there's enough to go 'round fer a couple o' meals?"

"I think so. Chow," Tom answered soberly.

Chow hustled from the kitchen to the lab and opened the door. He stood stock-still, his mouth open, when he saw Tom and Bud armpit deep in mushrooms.

"Wal, brand my electric skillet!" the Texan gulped. "I sure never saw so many leftovers in all my born days! It'll take more'n a few omelets to use up this batch!"

When Bud explained what had taken place, Chow phoned an SOS to the main kitchen of Enterprises. "Gitup here pronto!" he ordered the cook who answered. "Every last man o' you! An' bring all the boxes you kin lay your hands on! We've got a consignment of a million mushrooms to carry down!"

"Hold it. Chow!" Tom warned. "I'd better see if they are fit to eat." Quickly testing a few of the fungi for poison or radiation, he proclaimed the results negative. "Safe as mushrooms from the market," he

concluded. "They're all yours, Chow."

Grimly Chow set to work, supervising the men as they packed the boxes with the produce of the Transmittaton. When the last of the mushrooms had been cleared away and the floor swept, the men filed out of the lab. Each carried away a heavy box. Chow stored one in his freezer.

Thatnoonthe main course for lunch in the executive dining room was mushroom omelet with mushroom sauce. The Swift employees each got a side order of grilled mushrooms.

"Tasty," Bud admitted. "But aren't you going pretty strong for one dish?"

"You ain't seen nothin' yet,"Chow retorted. "You fellers handed me a ton o' mushrooms, an' I aim to show you-all what I kin do with 'em."

Tom spent the afternoon going over the quantity-control device of the Transmittaton. Bud made a thorough check of the jet bound forSantiago.

Mr. Swift had already arrived inChileand was now setting up the underground lab at the Castilla hacienda. He had flown down in the Sky Queen with the necessary equipment.

Bud came into Tom's lab aboutfour o'clock. "A-OK for the jet," he reported. "We can take off in it whenever you say the word, Tom."

"We're not taking off in it."

"How's that again?" Bud looked dumbfounded.

"Operation Wild-Goose Chase," Tom told him. "We'll trick the Brungarians. Cal Jones and Harry Lawton will fly that jet toSantiago."

Both pilots were trusted workers at Swift Enterprises.

"Cal and Harry resemble you and me," Tom said. "Same size and build. From a distance it's hard to tell us apart. So the espionage boys from Brungaria will think Cal and Harry in our jet are you and me."

"And tail them," Bud added, smiling.

"Right. You and I and Chow will go on a commercial flight toSantiagoand slip in unnoticed while the spies are concentrating on Cal and Harry."

The two stand-ins made no attempt at secrecy as they boarded the jet at Enterprises aboutsix o'clock that afternoon and took off forSantiago. Bud, Tom, and Chow rendezvoused secretly the next day at a New York Citymotel and caught a taxi toKennedyAirport.

"We'll split up now," Tom declared, "and travel as if we didn't know one another. Here are the tickets. I made sure we have seats in different locations. Keep your eyes and ears open."

Chow looked dubious as he took his ticket. "In the Panhandle," the Texan protested, "we don't duck varmints. Tom, why don't we have a Western shoot-'em-up showdown with these sidewinders?"

"You may get that sooner than you think," Bud warned. "I'll bet the Brungarians will be armed when

they come looking for us!"

"Besides," Tom pointed out, "we have to find out how much they know before we move in on them!"

Carrying suitcases, the three boarded a plane forSantiago. Tom took special care with his bag. The Racodio was inside, and he did not want his valuable language analyzer damaged.

After an uneventful flight, the plane landed at the Chilean capital. Tom and Chow went to a first-class hotel overlookingSantiago's lively Avenida Bernardo O'Higgins, the city's central boulevard. They registered under assumed names.

Bud rented a car at the airport. He set out for the Castilla hacienda, admiring the scenery as he drove, but maintaining a good speed. There was no sense wasting time when he had to cover a hundred miles from the capital to the mountains.

"I hope I can remember the trail Burkart followed," he thought.

Back inSantiago, Chow went for a walk after dinner. Tom took a sightseeing bus to Santa Lucia Hill rising above the center of the city. While waiting for his and Bud's stand-ins to arrive as prearranged, he strolled around the battlements erected in the sixteenth century by the Spanish founder of Santiago, Pedro de Valdivia.

Cal Jones and Harry Lawton arrived on schedule. Tom tugged at the lobe of his left ear to signify he wanted to know it Operation Wild-Goose Chase was succeeding.

Caltook a handkerchief from his breast pocket, opened it out, carefully refolded it, then he replaced it in his pocket.

"The Brungarians have swallowed the bait," Tom interpreted.

He did not dare speak to Cal and Harry, but he made a series of slight gestures with his hand. They understood that he was telling them to begin the major phase of the plan, leading their Brungarian pursuers up the Pacific coast of Chileand back to the United States.

"Will do," Harry messaged by removing his straw hat and carrying it in his hand. He and Cal disappeared down the hill.

Tom turned to go back to his bus. He had taken only a few steps when a tall, thin man wearing a slouch hat stopped him under a street lamp.

"Excuse me," the man said in English, "have you got a match?"

Tom started. The man spoke with a distinct Brungarian accent!

"I am sorry," Tom said abruptly in Spanish. "I do not understand. You will have to find somebody who speaks your language."

Tom hurried off, feeling uneasy. "That fellow's height could mean he's the Tall One we've heard mentioned," the young inventor mused. "I wonder if he recognized me."

Tom kept on the alert to see if the stranger were shadowing him. He got back to the hotel convinced he

had not been followed from Santa Lucia Hill.

Chow was asleep in his room, and Tom went to bed too. That left the third member of the trio still awake—Bud, who by now was bumping through the foothills of theAndes. The glare of his headlights illuminated flowers, trees, and fertile fields with neat farmhouses.

"This doesn't look familiar," he muttered to himself after a while. Driving on, he eventually realized he had taken a wrong turn and was lost in the mountains.

His motor coughed, sputtered, and went dead. "Out of gas!" he groaned. "But I came a good distance in the right direction. The hacienda might not be too far from here."

He examined the map and decided he could cut through the woods to Castilla's home. After a couple of miles, his flashlight gave out, leaving him to feel his way among the trees and up a hill where a huge pointed rock at the summit stood outlined against the sky.

Bud trudged upward, hoping he could see the hacienda when he reached the top.

A harsh growl stopped him. He smelled a strong animal-like odor. The hair rose on the nape of his neck at the thought of a savage beast, a bear or a cougar, behind the rock.

A huge man-like figure, covered with white shaggy hair, stepped from the shadow of the rock directly into his path. Bud hardly had time to wonder whether this was the legendary snowman, when with a snarl the creature started toward him!

CHAPTER VIII FLAMING ATTACK

THE fearsome-looking creature came on with hands upraised in a menacing gesture! Bud could not see its features in the darkness and did not wait for a close-up. Terrified at the idea of being crushed in its brutal grasp, he fled down the hill into the darkness of the woods.

Stumbling and gasping. Bud plunged on among trees and bushes. For a hundred yards he heard the growls of his pursuer. Then the sounds behind him ceased. He paused beside a rock at the foot of a gully to catch his breath.

"I'd better work out some kind of strategy," Bud muttered.

He dared not go up the trail again, with the monster lurking at the top of the hill. And there was no point in taking any other direction since he would risk getting lost in the forest. He decided to lie down by the rock to wait for daybreak. Gradually his fears gave way to exhaustion, and he fell into an uneasy sleep.

Although Tom was in a comfortable hotel bed, he did not sleep much better. He kept waking up and asking himself, "Did the Tall One recognize me on Santa Lucia Hill? If so, what should I do about it?" He rose early, worried.

After breakfast Tom rented a car and drove to aSantiago streetcorner where he and Chow had agreed to meet. He picked up the roly-poly Texan, who boasted of having enjoyed a good night's sleep.

"That's standard operating procedure." Tom grinned. "You could sleep through an earthquake!" He drove rapidly toward the Castilla hacienda.

As they rode along in the foothills of theAndes, they heard a faint cry. Chow placed a hand on his companion's shoulder.

"Easy with the reins, pard. This nag's gallopin' too fast fer me to size up that maverick who's tryin' to hitch a ride with us!"

Tom braked and gazed up the hill. "Say, Chow, that looks like Bud!"

"Our brand, all right," the cook said as Bud ran toward them. "Why are you runnin' around on this here range?" he demanded as the youth jumped in.

Tom stepped on the gas. The three were barreling along at top speed while Bud recounted his adventure with the giant. He explained that he had been asleep by the rock when the sound of the car's motor awakened him. He had come running down to ask for a lift.

"This huge creature you saw might be the so-called snowman that has been frightening the villagers," Tom remarked. "Could you lead me to the place where you met him?"

"Could I!" said Bud. "It's burned into my memory!"

"We'll go there this afternoon on horseback. Perhaps we'll find some clue to what the creature is and where it hides."

Tom briefed Bud on his encounter with the tall, thin man on Santa Lucia Hill. "It's possible the Brungarians know we're here," Tom added as he turned the car into the entrance of the Castilla hacienda.

The orange grower was waiting for them with Burkart and Mr. Swift. "The two Chilean engineers are scouring the mountains for Alvarez and the cave with the mastodon," Castilla reported. "No luck so far."

"I'll send a man with a can of gas to bring in your stranded car," Burkart told Bud. "From your description of the terrain, it must be just over the hill. And I'll have both cars driven back to the rent-a-car outfit where you fellows hired them."

A few minutes later Chow called out, "Come 'n' git it!" At Castilla's invitation the Texan had installed himself in the kitchen and whipped up second breakfast. "Scrambled eggs 'n'—"

"Mushrooms!" Bud guessed.

"You've hit the bull's-eye. Buddy boy!" Chow retorted. "I brought a sackful of 'em with me!"

"You deserve a reward for that. Chow," Bud said, winking at Tom. "Why don't you join us for a ride through the mountains?"

"Sure thing, pardner. No true Texan turns down a chance to git astride a cayuse !"

As Chow disappeared into the kitchen, Bud whispered to Tom that he was going to get even with Chow for whipping up the never-ending mushroom concoctions.

"I'll see that Chow gets a good scare in the mountains!" Bud said gleefully.

Mr. Swift then escorted Tom and Bud through the lab he had constructed. "This is underneath those low tile-rooted outbuildings beyond the house," he explained. "We couldn't have finished it this soon except for your earth blaster, Tom. That machine chews rock like candy! It hollowed out this area in no time flat."

The lab had two rooms. One, for general work, held a completed peri-prober, Tom's combination periscope and megascope for studying the heavens. The barrel of the peri-prober projected aboveground behind one of the buildings.

Leading the way into the second room, Swift commented, "We'll handle the Photo-Essence in here, Tom, if and when you succeed in bringing a sample down to earth. We'll set up the Transmittaton on this side, and the receiving tank over there."

"How's the work on the tank going at the university?" Tom asked.

"Not too fast, I'm afraid. The plans have disappeared! The professors think a Brungarian agent stole them. I've sent duplicates, but it's a setback for all of us."

"We'd better be prepared to get along without the Transmittaton, Dad."

"Yes, Tom," his father agreed. "You may have to rely on your X-raser to release the mastodon from the ice. That's why the Sky Queen is parked in a remote valley with a skeleton crew aboard. Your Flying Lab can transport the beast. Also, a pilot is standing by with an ordinary jet in case additional transportation is needed."

Bud was looking about the underground complex. "How many entrances does this lab have, Mr. Swift?" he inquired.

"Two tunnels. Bud. The one we used when we came in from the hacienda cellar, and the other from the stable. They're camouflaged to keep intruders from finding them."

After lunch Tom opened his suitcase and produced the Racodio model. Mr. Swift agreed to spend the afternoon working on the machine while the boys went by horseback with Chow to the place where Bud had seen the white giant.

"I can't wait to git my legs around a hoss," Chow said with a wide grin.

Senor Castilla ordered three of his finest ponies saddled. Tom and Bud mounted nimbly. Chow swung into the saddle with the practiced agility of a rider who had followed the cowpokes in the Texas Panhandle. His bowlegs got a firm grip on either side of his pony.

"Yippee!" he cried, waving his hat. "Let's head fer the hills!"

"This way, pardner," Bud shouted in reply.

Following Burkart's directions, he started off at a rapid canter. When he reached the rock at the top of the hill, Bud reined in his mount and waited for the other two to join him.

"Chow," said Bud, "remember the snowman I met in the mountains last night?"

"Sure do!"

"Well, this is the spot where I met him! I wonder if he's around today."

"Don't talk like that. Buddy boy," Chow said uneasily, eyeing the narrow trail along a cliff. "I ain't fixin' to meet up with no such ornery critter!"

"But suppose he's fixin' to meet up with you," Bud needled Chow. "Suppose he spooks your horse into a stampede through theAndes?"

As it frightened by the words, the three ponies suddenly reared. Snorting, they began to buck and then run along the narrow ledge with a sheer drop of hundreds of feet.

Tom and Bud fought to control their mounts. "Watch out," Tom yelled, "or we'll go over the cliff!"

"I can't do anything with this fellow!" Bud shouted back.

The ponies stopped running, but reared and bucked wildly. Suddenly firm hands grasped each bridle.

"Whoa there, you critters! Whoa!" demanded Chow.

He had jumped from his pony and miraculously got strong grips on the boys' bridles. The Westerner quickly subdued the excited mounts.

"Thanks, Chow," Bud gulped. "You're an even better horseman than I thought. When I was kidding you, I didn't expect this to happen."

"I wonder what spooked the ponies," Tom remarked. "Did the scent of some strange mountain creature make them buck like that?"

He dismounted and walked back to examine the spot where the ponies had been frightened. "I don't see tracks," he said. "And I don't believe in any legendary snowman. But it is odd."

"The creature I saw last night might have been a human being in disguise," Bud admitted.

"Perhaps a Brungarian," Tom commented. "We should have thought of that."

The three rode back to the hacienda, where they found that the Chilean engineers had returned from another fruitless search for Alvarez and the mastodon. Castilla and Burkart had questioned the villagers, but they also had failed to learn anything about the location of the cave.

"It all seems hopeless," Castilla groaned.

"And yet we can't give up!" Bud declared. "You'll have to think of something, Tom!"

Chow came in to announce dinner was served. He had made friends with the hacienda's servants and introduced them to his box of mushrooms.

He said solemnly, "I fixed yo' all a mushroom surprise. Spanish omelet with mushrooms for a first course." Bud meekly finished his without protest, but enjoyed the rest of the dinner more.

That night Tom stayed up late testing his peri-prober. Scanning the solar system in search of Mars, he found his angle too high. Diminishing this, it became too low, picking up terrestrial scenery, mostly the peaks of theAndes.

He was about to reverse direction when something on a mountaintop caught his attention. "A circle of blue flames!" Tom gasped. "The phenomenon that's been scaring the Indians!"

He called Bud, who hurried in. It required only a moment's consultation for them to reach a decision on a course of action. After donning their mountaineering gear, they set out in one of Castilla's two jeeps. When they reached the foot of the peak, Tom and Bud began to climb.

"The fire's out!" Bud cried as they drew near the summit.

"Let's take a look at the site, anyway," Tom said, puffing. "We might find a clue."

When they reached the top the boys could see the lights of Santiagofar off to the west. Near them the mountainsrose, peak after peak, with dark passes between them.

As Tom and Bud gazed off into the distance a ring of fire suddenly flared up around Tom and Bud! The blaze drew nearer and nearer. In a moment flames were licking at their parkas!

CHAPTER IX RACODIO RESCUE

"COME on, Tom!" shouted Bud in alarm. "There's no other way out!"

Covering his face with both arms, he plunged forward like a fullback hitting the line. Tom followed, and the two boys plowed through the ring of fire.

It seared their parkas and set their clothing ablaze. They threw themselves to the ground and rolled over and over in the snow, slapping at the burning fur until the fire was out.

Tom looked anxiously at his pal. "Are you okay, Bud?"

"No broken bones. But I'll have a few bruises to remind me of this incident!"

The boys rose and saw that the ring of fire had died as suddenly as it had flared up. Tom crouched on one knee to examine the discolored snow where the blaze had been.

"A chemical with a copper nitrate base did this," he judged. "The kind used in fireworks. The stuff was laid down in the snow and then set on fire. Whoever did it must have been hiding near here."

Tom looked behind a cluster of snow-covered rocks, leaned over, and picked up something. "Here's our proof. Burned matches. Bud!"

The pilot looked grim. "Then there's a spy network in the area. The Brungarians must have a hideout near this peak, Tom!"

As the boys started down the mountainside, the wind rose to a gale. Heavy snow began to fall.

"We're caught in a real storm!" Tom muttered. He stopped under an icy overhang so they could get their bearings.

Suddenly Bud grasped Tom's elbow. "Listen!"

They heard a voice speaking in a whisper. The words were in Brungarian, which the boys understood fairly well. "We must stop Swift!"

"If only our machine would come," a second voice replied, "we could take the mastodon and leave. But the machine isn't finished. It won't be here for another five days."

The voices faded away. Tom and Bud stared at each other. Where could the speakers be?

"I think it's a freak of acoustics," Tom said. "They're probably a long way off, and we've been hearing an echo."

"We may as well forget them and head for the hacienda," Bud commented. "The storm is getting worse. We can come back and search for the hideout another time."

"Good idea, Bud. We know the Brungarians won't be able to move the mastodon for five days. That gives us a little time to map out our strategy before their machine arrives."

At the hacienda they found Mr. Swift greatly disturbed. He had been experimenting with the Transmittaton. In the midst of the experiment, the transmitter beam had gone dead.

"And at the worst possible time," Tom's father complained. "We've received another message from our space friends!"

"What did they say, Dad?"

"More ghosts are streaming into our galaxy! A great horde of them are mustering on the other side of Mars!"

Bud winced. "Could they be preparing to attack earth, Mr. Swift?"

"Possibly, Bud! But our space friends still haven't been able to communicate with them! Tom, it's up to you to do it."

A check of the Transmittaton revealed a malfunction serious enough to require some basic restructuring.

"We can't wait for repairs," Tom pointed out. "Bud and I will go up in the Cosmotron Express. I'll try to communicate with the P-E by Racodio!"

Tom sent a message to Swift Enterprises ordering his Cosmotron Express to be prepared for blastoff fromFearingIsland. He and Bud took a jeep to the valley where the Swift jet was parked.

Chow insisted upon going along. "You buckaroos don't eat proper when you're alone. Somethin's always missin' from your diet!"

"It sure isn't mushrooms!" Bud muttered.

They landed at Swift Enterprises in daylight, boarded a smaller plane forFearingIsland, and arrived just as the last of the Cosmotron's fuel tanks was being tested.

"A-OK?" Tom inquired.

"A-OK!" the chief engineer replied.

Tom, Bud, and Chow went aboard. With Tom at the controls, the spaceship roared upward from its launching pad. The earth rapidly diminished in size. The moon grew larger, and then it too fell behind.

Mars was off to their right. Tom set a course for the point on the planet's orbit where its path and the Cosmotron's would intersect at the critical moment.

"Autopilot will take us straight to our rendezvous," he assured his companions.

"Kinda like headin' 'em off at the pass," Chow remarked. He had come in with the usual early-flight snack for the men at the controls.

"Don't tell me!" Bud moaned. "Let me guess! Mushrooms on toast!"

"Why not, pard?" Chow demanded.

Tom grinned. He left the spaceship on auto-pilot, and after sampling Chow's fare, he and Bud went to shower and take a nap. Tom set his alarm because he had work to do before reaching Mars.

"The Racodio must function perfectly," he told himself, "or we're in for king-size trouble when we meet the galaxy ghosts!"

At the end of the trip to Mars, Bud took the controls and carefully plotted a path that put them in orbit at a safe distance from the Red Planet.

"The rule is: Observe now, approach later," Tom reminded him. "We want to know what we're getting into and not be trapped."

The spaceship curved around Mars. The three observers gasped at the sight ahead of them. On the other side of the planet was an enormous seething cloud made up of what appeared to be globules of mist! Millions more were streaming in from outer space! The cloud was expanding at a tremendous rate.

"What a glare those ghosts are throwing off!" Bud said in a trembling voice. "And look at our radiation counter. It's going wild!" he cried out.

"It must be the ghosts' strange radiation!" Tom said. "And it's becoming stronger by the second!"

"What kin we do to corral 'em?" Chow asked. "Those loco critters sure are somethin' new!"

Tom said, "You stay in the Cosmotron, Chow. Bud and I will go out for a closer look at these ghosts!"

The boys put on antiradiation suits and entered a life cap. This was a miniature spaceship that was equivalent to a lifeboat on a seagoing vessel. Made of Tomasite, the capsule could hold two men. It was powered by repelatrons, and capable of traveling away from the mother ship, operating on its own, and returning after its mission.

Tom remarked grimly, "This is the biggest test any life cap has been put through!"

Bud guided the baby spaceship toward the eerie pulsating horde of invaders. Both he and Tom had observed that the appearance or intensity of the ghosts was not altered by any known environment.

Tom operated the Racodio. "Identification! We are earthlings!" he messaged the P-E. "Who are you?"

He and Bud flew closer and closer to the radioactive mist with its glowing globules.

"They don't seem able to translate my message," Tom said, "or answer the Racodio!"

"Maybe their radio waves aren't strong enough to reach us yet," Bud suggested.

"Take us right in and I'll find out! It's risky, but we have no alternative. Either we make contact with these beings from beyond our galaxy, or else we go up in smoke!"

Tom reminded Bud that Tomasite had been unaffected by the radioactive rock that had bounced around his lab. But, they both wondered, would the Tomasite hull of the life cap be able to withstand the fantastic radiation emitted by the Photo-Essence?

As they neared the seething mist, the miniature craft stopped moving under its own power. Bud jerked the controls. "The engine's gone dead!" he cried.

"This mysterious radiation must have knocked out our repelatrons!" Tom replied grimly.

Before the boys could decide what to do, a huge globule of shiny mist flashed past the life cap's bubble top and buried itself in the ghostly mass. A moment later the entire cloud gathered speed and momentum in the direction of the life cap! As the horde surged toward Tom and Bud, they could feel the temperature in their craft skyrocket. Burning rays invaded their space suits.

"Tom!" Bud shouted. "They'll burn us to cinders!"

CHAPTER X TRACKING THE GIANT

IN a moment the seething radioactive mass would envelop the tiny spacecraft and its two occupants! Desperately Bud jerked at the controls. Tom beamed another message at the oncoming horde!

"Stop! Stop!" he warned through the Racodio.

Then, as if some sort of switch had been flipped, the cloud of pulsating globules vanished.

"They're gone!" Tom shouted.

"And the repelatron power is back in the life cap!" Bud exclaimed. "Boy, thatwas weird!"

There was no time to speculate on the phenomenon. The boys zoomed over to the Cosmotron Express, entered, and stripped off their damaged suits. The inner lining was still intact.

"Lucky for us the rays didn't get all the way through," Tom said grimly. He ordered the two suits and the life cap sealed in a radiation-proof locker.

The boys went to the pilot's cabin from which Chow had been watching the encounter. His teeth chattering, he remarked, "Them's a lot o' ornery critters you fellers jest chased off our range!"

Tom frowned. "We don't know where they've gone, or how long they'll stay away. Chow."

Bud was hopeful. "The Racodio must have got through to them finally."

Tom agreed. "But they didn't answer. I want to go out there again and try for another contact."

Later the boys climbed aboard another life cap for a reconnoitering expedition through the solar system as far as Saturn. But the galaxy ghosts remained out of sight and silent.

"This is the most puzzling mystery we've ever had," Bud grumbled when they were back in the Cosmotron Express. "I wish that cloud or mist or radiation belt—or whatever it is—had tried to thumb a ride with us! Then we could have found out more about the ghosts."

"You jest watch," Chow predicted as they prepared for the flight home. "We'll no sooner land an'them mean little critters'll be ridin' the space range again, lookin' for trouble."

"Chow, you might try to lasso one," Tom said, smiling. "If you can't, I'll give it a try."

"With what?" Bud asked as he set the control system forFearingIsland.

"The Transmittaton. Maybe I can trap one of those ghosts in the receiving tank. We'll double the thickness of the Tomasite walls as an extra precaution against that intense radiation."

"You mean the critter won't be able to get at us?" Chow asked. He looked relieved.

"Or get away either," Bud remarked.

"I hope not," said Tom. "butwe can't be certain. It'll be risky." For a moment he stared off into space. "Perhaps we can get the ghost to communicate after giving it a taste of captivity."

The return flight on the Cosmotron Express was uneventful. The three boarded a jet for another flight to Chile, where they landed that afternoon in the valley.

"Tom, do you know what day this is?" Bud inquired as they clambered from the plane.

"Yes," the young inventor replied. "This is the fifth day since the Brungarian conversation we heard in the mountains. They may be preparing to make their move!"

Mr. Swift was waiting in one of Senor Castilla's jeeps. When the boys told him of their amazing encounter with the galaxy ghosts, he commented:

"You're right, Tom. The Transmittaton is our best bet in dealing with them. Fortunately, I corrected the faulty gadget. You two can go ahead searching for the mastodon cave."

At the Castilla hacienda Tom and Bud put on their mountaineering clothes, and set out on horseback to explore the area of the blue fire that had nearly engulfed them. When they reached the foot of the mountain, they tethered the animals and began to climb.

"If we can find the Brungarians' hideout, we'll add an ingredient of our own to their plans!" Tom said. "I hope their machine hasn't arrived yet."

"It may not be operational," Bud commented. "We might fix their wagon before it starts rolling."

The boys followed the same path they had taken previously, and continued hunting for clues. They pushed through deep snowdrifts, edged along steep cliffs, and clambered over high peaks.

Sunset produced a fantastic display of light and shadow on the snow. The icy expanse seemed to be thronged with menacing figures.

"This is not my choice of a place to get lost in," Bud remarked. "We'd never be found even if searchers came after us with bloodhounds!"

At that moment a sound broke the silence. It drew nearer.

"That's a helicopter," Tom said. "Where is it, Bud?"

"Coming over that peak."

The copter hovered, its rotors churning furiously. A door opened and a couple of men lowered a cable with a large oblong box dangling at the end of it.

"Tom, thatmust be the Brungarian machine!" Bud whispered. "Why are they dropping it here?"

Tom pointed. "There's your answer."

A huge furry white figure was silhouetted against the sky. The creature tramped across the snow with long clumping strides, making for the point where the men in the helicopter were paying out their cable.

As the descending crate came within reach, the snowman grabbed it and swung the box onto a patch of open ground. After freeing it, he gave a signal.

The cable was quickly whipped up through the air into the copter. The craft started to move, circled around as if to make sure that everything on the ground was going according to plan, and whirred away among the peaks.

The hairy figure seized a couple of leather thongs and began to drag the box through the snow. Tom and Bud waited to be sure he would not see them, then followed his huge tracks.

"The same prints we found at the home of Juan Alvarez," Tom muttered.

"That means he'll take us where we want to go," Bud said. "Let's not lose him."

Stealthily the boys tailed their quarry around the peak to a wide crack in the icy wall of the mountain. The crevice was hidden by a snow-covered spur of rock. The giant footprints stopped there.

"A natural hideout," Tom observed. "We could have looked for this entrance a hundred years without finding it."

"Shall we go in?" Bud asked.

"No use waiting for an invitation. Bud! I want a look at that Brungarian machine. But caution does it. These guys won't be very hospitable if they corner us in there!"

Tom and Bud scrambled through the crevice into a passage cut in the solid rock by some geological convulsion eons ago.

"There's a flickering glow at the other end of this passage," Bud whispered.

Silently the boys stole along, the rocky floor. At the opposite end they craned their necks and peered through the opening.

They saw a large hollow chamber with a fire burning in the center of the floor. A small, thin, sallow man was seated beside it, bound hand and foot. His face was haggard. Brilliant dark eyes reflected his state of terror. The man started with alarm as Tom and Bud emerged from the darkness of the passage.

"Who are you?" he asked fearfully in Spanish.

"We are friends," Bud replied. "You are Juan Alvarez, the kidnapped villager?"

"Si, senor," the captive replied. "I hope you will help me escape."

As the boys untied Alvarez they assured him

of their aid. He stood up, rubbing his wrists where the rope had bitten into them. Alvarez recounted the story of his capture.

"It was night, senors. I heard a knock on my door. A very tall man came in. He pointed a revolver and forced me to tell him the location of the cave where the mastodon is. After that, he waved the gun and ordered me to leave my house."

"The Tall One," Tom murmured. "The guy on Santa Lucia Hill who asked me for a match. But go on, Senor Alvarez. What happened next?"

The man's eyes widened in a spasm of fear. "A giant appeared! The Snowman of theAndes! He seized me! I fainted. When I regained consciousness, I was here."

"Are you hungry?" Tom asked.

When Alvarez nodded weakly. Bud brought out some crackers and a Thermos of hot chocolate he had in his rucksack. Alvarez speedily consumed both, but declined any of Tom's food when it was offered.

"One thing I've noticed in here," Bud remarked. "When we talk in normal tones, we sound as if we're whispering. Why isthat. Tom?

"Acoustics. We're dealing with a whispering-gallery effect. Sounds become diminished in this cave, but they carry a long way outside."

"You are correct, senor," Alvarez put in. "That rock chimney in the corner leads the sounds into the open air. The men from Brungaria have used that means of communication many times since I have been here."

"What about the snowman?" Tom asked him.

"I do not know where he is," Alvarez confessed. "I believe he too is a prisoner of the Brungarians. But come with me. There is no time to lose."

The Chilean led Tom and Bud through a very narrow tunnel that wound and twisted in a direction slanting upward.

"Seems as if we're climbing toward the top of the mountain," Tom said.

"Indeed we are, senor, as you will find out when we reach the end of the tunnel."

Alvarez took them into a large, stony, snowy chamber with a smaller open roof. Looking up, they could see stars in the night sky.

"That opening is well hidden by encircling boulders," the Indian remarked. "The huge rocks keep this place from being seen by anybody roaming around the mountain."

"And now for the surprise. I could tell this floor was only a natural bridge," Alvarez went on, "so I took away some of the stones to find out what was underneath." He pointed to the small open section to one side.

First Tom, then Bud beamed their flashlights into it. Each drew in his breath sharply. Before them lay a deep pit filled with ice. In it was the immense frozen body of a mastodon!

"What a sight!" Tom said in awe.

"The way it'slying there, I'd say it's been asleep a lot longer than Rip Van Winkle!" Bud said jokingly. "It's going to be a real job hauling this jumbo out. How did the creature get in here, anyway?"

"I'm sure it wasn't trapped in a bog and froze into the subsoil, as often happened to prehistoric animals," Tom observed. "This beast must have been chased up here. It fell in, and couldn't get out. Then it froze to death and became embedded in solid ice."

"Where did the ice come from?"

"Seepage from an underground spring is my guess. The water rose and covered the animal, froze around it, and here it's been, perfectly preserved, ever since."

Tom bent down to examine the natural bridge. "A rockfall could have caused this to form," he added.

"I think you're right, senor," the Indian said.

Tom, his eyes now adjusted to the darkness, noticed a large object standing in one corner of the cave under a protective canvas.

"Shine your light over here. Bud," he said, pulling off the canvas. "This is a type of generator. And there are some Brungarian words on it. Translated, they mean Melt Master."

"Tom, you don't have to tell me what the Brungarians are going to do with it," Bud declared. "They're going to melt the ice around the mastodon!"

Alvarez shuddered. "That would melt the snow up above and start an avalanche rolling down on my village!"

Bud asked, "But how can they remove this bridge?"

Tom shrugged. "Who knows? It'll be tricky to do that and not ruin the mastodon!"

He went on grimly, "Bud, you and Senor Alvarez pick up the horses and make tracks for the hacienda as quickly as you can. Alert our crew to prepare to move the mastodon. I'll come along later."

"What do you intend to do here, Tom?"

"Put the Melt Master out of commission as much as I can."

The other two hurried along the tunnel to the big cave. Tom, meanwhile, surveyed the Brungarian machine with a critical eye. "This appears to be a vital connection," he judged, looking at a coil of wires joined to an instrument panel. "I'll wreck this first."

Grasping the coil firmly in one hand, he gave a hard yank that tore the mechanism loose. It fell to the floor of the cave.

CHAPTER XI THE INDIAN'S SECRET

GRADUALLY consciousness returned. Tom climbed woozily to his feet.

"Boy, that machine carries a punch!" he muttered. "Lucky I didn't get a full dose of electronic juice!"

As Tom turned to look at the Melt Master, wondering it he had succeeded in putting it out of commission, a growl from the corridor startled him. Tom began to run. When he reached the large chamber, lights from wall lanterns revealed the snowman coming through the entrance toward him!

Tom retreated from the immensely tall and powerfully built figure. "He's an Indian and at least seven feet tall," Tom estimated.

The man wore a shaggy costume of white fur with mittens and hood, and white boots. But the face was uncovered. The skin was a deep copper color and the man's wild black eyes glared at Tom like glowing embers.

The giant advanced with another growl, raising a crude stone hammer in one hand. Tom retreated step by step across the cave with the giant stalking him relentlessly. As Tom's back touched the wall, he could retreat no farther. He was cornered! Tom set himself in a wrestler's stance.

The snowman took a roundhouse swing with his primitive weapon. Tom ducked under it, twisted past his assailant, and darted into the tunnel leading to the outside.

Halfway to his goal, he nearly piled into several Brungarians entering through the crack in the rock wall. The huge Indiancame pounding down on him from behind.

"I'm trapped!" Tom murmured.

Desperately he turned to the left, where an opening into a side tunnel caught his eyes. He raced into the passage and barreled ahead at top speed.

He could hear his pursuers. The Brungarians shouted furiously. The snowman emitted roars that echoed through the rocky corridor.

Tom ran faster. His breath came in short gasps. Just when he felt he would collapse and be pounced on by the wild Indian, Tom reached a shallow cave with a wide mouth overlooking the mountain valley.

Two men were in the cave. Since they had binoculars draped around their necks, Tom figured they must

be Brungarian lookouts. They scrambled to their feet.

Tom rushed past them, leaped off the ledge outside the cave, and landed in a snowbank below. Jumping onto the slope, he ran off.

The Brungarians shouted in fury. Looking back, Tom saw the huge snowman poised awkwardly on the ledge. Apparently the giant Indian, hampered by his suit, felt he was not agile enough to make the jump to the snowbank.

As he teetered on the rim, the Brungarian in the lead rushed forward and pushed him violently off the ledge. The snowman hurtled through the air.

He missed his footing on the snowbank, fell over, and careened down the slope. He gave a shriek of fear as his bulky body skidded toward a steep ledge and tumbled off. The two Brungarian lookouts leaped into the snowbank and went after him as fast as they could in the deep drifts.

"Now's my chance to escape," Tom said to himself.

He hastened on until he heard a harsh voice in Spanish uttering dismal cries of terror and pain.

"Sounds like the snowman," Tom thought. He cut across the slope toward the sound.

Tom climbed to the top of a boulder and saw his former pursuer lying on a flat outcropping of rock. The giant's head was cut. He was trying to fend off the blows and kicks of the two Brungarian lookoutswho had caught up with him.

Furious, Tom leaped from the boulder. Taking the Brungarians by surprise, he gave one a wallop in the jaw with his left fist, and took care of the second with his right. Both toppled over, fell off the outcropping of rock, and rolled down the slope. Far below, they got up and ran off.

To their bewildered and frightened victim, Tom said in Spanish, "I am a friend. I will help you get away."

The man relaxed. Tom gave him some cookies and a drink of chocolate from his Thermos, then bandaged the cut on his head. The big fellow was convinced now that Tom was his friend. He agreed to accompany the young American back to the village.

"I believe you belong to the original people of Chile," Tom commented as they plodded onward through the snow.

"I am a Tehuelche," the man said proudly. "My name is Pedro Martinez."

Tom knew the Tehuelches were an extremely tall Indian race living inPatagonia. They had been there when Magellan sailed through the strait, later named after him, on his first voyage to circumnavigate the globe. Struck by the remarkable size of the Indians, Magellan's men, rather short themselves, called the natives "giants."

"Some of my people moved north into this valley many years ago," the Indian informed him. "I do not know why. Later they all died. I am the only survivor."

"You must be a hermit," Tom observed.

"Si, senor. I am a hermit of theAndes. I live in a hut here in the mountains."

"How did you become involved with the Brungarians?"

The big Indian shuddered. "They are devil men!" he cried. "Two weeks ago they discovered my hut. They lay in wait. When I returned that night, they captured me!"

"And forced you to obey their orders," Tom inferred. "They made you frighten the villagers by posing as the terrible Snowman of theAndes."

"You wonder why I did it, senor? I was afraid of them. They made hot flames burn in the snow! They had boxes that talked!"

"Radios," Tom explained. "I understand now. You couldn't do anything else."

Before they reached the village, Tom asked his companion to remove the white suit. Underneath he wore khaki pants and a tunic. When the two arrived in town, Tom called on the people to gather in the square. Then he introduced Pedro Martinez to them.

"Pedro is the snowman you were so afraid of. Actually, he is a Chilean Indian likeyourselves . He hopes you will accept him as one of you."

Tom answered the questions that were fired at him in rapid succession. Then he explained about the blue fire and promised to show them later how it worked. The villagers were angry about the hoax.

"We are grateful to you, Senor Swift," one stated emphatically. "You have removed the fear that has haunted us. Pedro Martinez can stay here as long as he chooses."

"Perhaps I will go back to my hut in time," Pedro said simply. "But I would like to remain here until Senor Swift chases the Brungarians from the mountains."

Tom said good-by to Pedro, who thanked him for his help, then rode back on a borrowed horse to the Castilla hacienda. His father and Bud were holding a conference with Castilla and Burkart.

"Where's Juan Alvarez?" Tom queried.

Bud chuckled. "He's in the kitchen having a meal. Chow's serving him some choice leftovers—steak and mushrooms!"

"Tom, what kept you so long?" Mr. Swift asked. "Bud and Juan got here hours ago."

As Tom recounted everything that had happened, the others listened in amazement. "You caught the snowman!" Bud exclaimed.

He grinned. "An Indian snowman!"

Mr. Swift remarked, "So the Brungarians have lost their star actor. Good work, Tom. This has certainly been a profitable day. The big prize is now within our grasp. Tom, tell me how the mastodon looks. Bud said he'd let you be the first to describe it."

Tom chuckled. "Like an iced elephant. He's in good shape and really mammoth. Right after breakfast

tomorrow, I'd better radio the news to the university."

Shortly afternine o'clock the next morning Tom contacted the West Coast scientists. They were delighted at the news, but said that the receiving tank was not ready yet for the mastodon.

Tom returned to his father and Bud, who were having breakfast. "The scientists say they'll have everything finished in a week or so, but we can't wait that long. We'll have to go ahead without the Transmittaton."

"The X-raser is ready," Bud commented.

Mr. Swift nodded. "So is the Sky Queen. I've given the crew orders to take the X-raser to the peak where you fellows found the mastodon cave. What's your plan now, Tom?"

"Dad, I'm going back to the mastodon cave as soon as I eat."

"What for?" his father demanded. "Haven't you knocked out the Melt Master?"

"Only temporarily. Any good Brungarian mechanic can repair the machine. I aim to make it unrepairable."

Bud grinned. "You mean destroy it? Tom, I'm going with you."

Tom shook his head. "Negative, fly-boy. I'll have a better chance of getting past those Brungarian watchdogs, and slipping in unnoticed, if I handle this operation alone."

Seeing his pal's disappointment, Tom added, "Don't fear that you'll miss any of the action. We have lots to do here before that iced mastodon comes out of its hiding place."

Senor Castilla came in to say Mr. Swift was wanted on his radiotelephone. A few minutes later the inventor returned and sat down at the table. Mr. Swift looked grave.

"What's up, Dad?" Tom asked.

"Another message arrived from our space friends during the night."

"What did it say?"

"Ghosts now on moon!""

Tom gasped as the meaning of his father's words sank in.

"The Photo-Essence is planet-hopping toward earth!" he exclaimed.

CHAPTER XII

P-E PERIL

"THE P-Ehave moved far and fast," Bud remarked. "One more jump, and they'll be here!"

Tom mulled over the problem as he finished his mushroom omelet.

"Our two jobs are coming to a head at the same time. We must fend off a P-E invasion from space. And we've got to stop the Brungarians from stealing the mastodon and starting an avalanche."

"Which do we tackle first?" Bud wanted to know.

"TheBrungarians, Bud. We'll leave the problem of the galaxy ghosts until night when they become visible. Another thing. Their odyssey from Saturn indicates that they move in steps. Perhaps strong sunlight diminishes their powers of radiation. I doubt if they'll be a threat to us for some time."

"So the Brungarians head the list of Swift targets," Bud concluded.

"Right, pal. I've changed my mind about going alone to the cave. You and I will handle this together. It's back to the mastodon."

Although the boys had had little sleep recently, they had no intention of going to bed. Cold showers and Chow's snacks had revived them. The urgency of the double crisis gave them the stimulation they required to carry on.

First Tom went to the lab and had his assistants mix the chemicals containing copper nitrate. After placing a pinch of the chemical on a metal dish, he touched a match to it. Instantly flickering blue flames flashed up.

"That's the secret of the mysterious fire," he told Burkart and Alvarez who were watching. "If you lay this stuff in the snow and then light it, you can show the villagers there's nothing supernatural about the blue flames they've seen blazing on their snowy mountaintop." !

"What shall I do after the demonstration?" Burkart queried.

"Give each man in the village a copper nitrate torch. That way, they'll learn to use the blue fire instead of being frightened by it."

"And since you've already introduced them to the mysterious snowman, they need no longer be afraid of him," Burkart observed.

"Yes, but you may as well take this plaster cast of Pedro's footprint as proof," Tom suggested.

"It explains why the Spaniard called the homeland of his racePatagonia," Bud observed. "The word comes from the Spanish meaning Big Feet."

Tom summoned his highly skilled technicians. The eight of them gathered around Tom while he detailed the strategy he intended to follow.

"Four of you will stay here to work on tonight's experiment," Tom said. "The other four will work on lifting the mastodon out of the cave."

"I counted fifteen Brungarians," Bud cautioned. "We'll need reinforcements."

"I know where to find them. Bud. The villagers are on our side now."

Tom nodded toward Burkart, Alvarez, and the four technicians he had chosen.

"Suppose you fellows go to the village. First give the people a copper nitrate fire demonstration. Then lead them up the mountain to the strategic jumping-off place."

"Which place is that?" Burkart asked Tom.

"The icy overhang where Bud and I stopped during the storm. That's where we heard the whispering voices." Tom explained how to find the spot. "Wait there until I call you."

"Then come on the double," Bud advised. "Tell the Indians to pitch into the Brungarians."

Burkart, Alvarez, and the four technicians promised to do this. They set out for the village in a jeep.

Tom checked the progress of the work of the other four men. They had placed several clear Tomasite boxes in the receiving tank of the Transmittaton. Each box contained a substance that Tom intended to expose to the radiation of any P-E the machine might capture. And each had a tight lid which opened and closed by remote control.

Bud rapped on the lid of a cube-shaped Tomasite box with a handle. "This one's not finished. But it's different from all the rest."

"It has to be different. Bud," Tom replied. "That's the one we'll use for carrying the galaxy ghost if we catch one."

"Carry it?" Bud grinned. "Where are you taking it-sightseeing?"

Tom was serious. "There's no telling what the creature may do. I want to be able to get it outdoors pronto if it shows signs of blowing up the lab or poisoning all of us with its deadly radiation!"

Tom assigned three lab technicians to work on the Tomasite tank. He warned them to keep the project going at top speed because he would need the gadget that night.

The fourth member to be left behind was Cliff Culbertson. He had come to the Swift organization because of a desire to help Tom perfect his inventions. Tom counted on him more than on any other aide.

"Cliff, how about assisting Dad in checking out the Racodio? That's the most sensitive device we'll be using to deal with the P-E."

The young man held up his hand, making a circle with his thumb and forefinger. "Will do, Tom. You can depend on the Racodio being ready when you get back tonight."

Tom and Bud went to get the equipment for their upcoming expedition to the mountain.

"Here are the pencil radios," Bud said, "and the copper nitrate torch. What's that you're carrying?"

Tom hefted a Tomasite bar with a button at one end and a triangular point at the other.

"My latest soldering tool. Bud. High-speed and electrically operated. You'll see how it works on the Melt Master if we don't run into a disaster up there in the cave."

Each slung a rucksack over his shoulder, then hurried outside and mounted the ponies that were waiting. The boys rode off to climb the peak where they had seen the mastodon. They left their mounts at the snow line. Tom and Bud climbed to the cave, and paused before entering it to look down the slope. Far below, they could see Burkart and the villagers toiling up the mountain, their blue torches burning brightly.

"They're not exactly the U.S. Cavalry," Bud remarked. "I just hope they come charging to our rescue if the going gets sticky."

"You and me both, fly-boy," Tom replied.

Peering cautiously through the crevice in the rock wall, and seeing no one, the boys slipped into the passage. They found the large cave empty, traversed the smaller tunnel, and reached the mastodon cave.

This time it was full of sunlight beaming down through the open roof. But it was not vacant! A man crouched beside the Melt Master, his hand on the switch. Brungarian engineers had repaired the machine. A bright new coil of wire gleamed where Tom had wrenched out the old one. The machine was operable again.

"He's aiming at the mastodon!" Bud shouted.

"He'll melt the ice and start an avalanche!"

Tom turned on the Tomasite soldering tool and leaped forward. His arm swept up, then forward in a terrific thrust. The electronic tip cut through the metal of the Melt Master and penetrated the mechanism. Dense acrid smoke seeped from inside the Melt Master.

The figure crouching beside it rose to his feet with a cry of rage. Tom gasped. This was the man who had accosted him on Santa Lucia Hill!

"So it's you, Swift!" he snarled.

"And you're the Tall One!" Tom countered.

"Yes, but you've discovered the truth too late," the man said with a leer. "You'll never get away to tell what you know. Look up there."

The Tall One pointed to the open roof. Angry shouts came from outside. A circle of swarthy faces appeared in a ring and stared down furiously. Equipped with ropes and hoisting gear, the men began sliding down into the cave.

Reacting instantly, Tom shouted, "Run!"

He and Bud raced into the passage and back to the large cave with the chimney.

"Burkart! Help!" Tom called frantically up the flue. "Help! Get up here!"

"And fast!" Bud yelled.

"I hope Burkart got the message," Tom panted.

The boys could hear shouts and the pounding of feet in the passage they had just left.

"We'll be killed if they corner us here." Bud groaned. "Come on!"

The two ran along the main passage and out through the crevice in the rock wall. They reached the mountain slope and scrambled down. The Brungarians were in pursuit.

"Where are Burkart and the others?" Bud called to Tom. The next second he lost his footing and slid about thirty feet.

Tom helped him up. Some Brungarians were on skis and were advancing rapidly.

"Faster!" Tom urged. "Change course and backtrack if they get too close."

Suddenly there were shouts below them. More Brungarians? Moments later a file of blue torches appeared from under an icy overhang.

Bud cried out, "The villagers!"

"And Pedro Martinez is leading them!" Tom shouted.

The enemies met head-on. The natives fought so fiercely that the Brungarians, amazed and frustrated, began to disperse in all directions. When the battle was over, Alvarez came up to Tom.

"This is the way I repay you, senor," he declared.

Tom smiled. "I appreciate your risking your life for me."

Alvarez led Bud and the four technicians to the opening in the roof of the mastodon cave. Their assignment was to signal the Sky Queen with torches of blue fire. The Flying Lab was ready to lower the X-raser.

Tom hurried back to the cave to be there when the X-raser descended. He rushed through the passage into the big cave, and on into the smaller passage and the mastodon cave.

Preoccupied with the thoughts of victory, Tom failed to notice that he had company until a harsh, threatening voice commanded:

"Stop!"

CHAPTER XIII THE CAPTIVE GHOST

THE Tall One stepped from behind the shattered Melt Master. He held a gun in his hand.

"All right, Swift," he blustered, "this is the end of the road for you. Move over to the passage and go on through. No tricks! You'll get a dose of lead poisoning if you try to pull a fast one."

The man moved warily around the pit into the center of the cave. The snub nose of his pistol pointed directly at Tom.

"Oh, no you don't!" came a voice from above.

Bud! With Alvarez he had reached the opening in the roof on the outside.

Picking up a wrench from the Brungarian hoist equipment. Bud hurled it down at the Tall One. The wrench struck the gun a heavy blow. It clattered to the floor.

The Tall One spun around, a terrified look on his face. He ran toward the tunnel.

As Tom relaxed, Bud called down, "How's that for pitching a strike? Think I'll make the big leagues?"

"You sure put that guy out." Tom chuckled. "And in the clutch too."

Bud became serious. "Are you going to follow him, Tom, or should we both?"

"Neither, Bud. Let him go. He's probably headed for the slope where the villagers are. They'll grab him when he barges outside. We have more important work to do."

A shadow darkened the cave as the Sky Queen maneuvered into position overhead. A network of ropes descended from the craft at the end of a cable. Tom deftly fitted the ropes around the Melt Master, which was then hoisted clear of the cave and deposited on the ground near the opening.

Next, the crew of the Flying Lab lowered the X-raser. The ground crew guided it through the roof to the floor of the cave.

The X-raser looked like a combined rifle and telescope. It worked on the same principle as a laser, hurling forth waves of radiation in a tightly condensed beam of incredible energy. But since it usedX rays rather than light rays, it was much more powerful than a laser.

Tom carried the X-raser to the edge of the pit. He pointed the muzzle downward, then pressed a button and sent an intense beam to penetrate the ice about two feet from the side of the frozen mastodon.

Chips of ice flew upward in a spray. The beam pierced straight to the bottom. Keeping the X-raser focused, Tom walked around the top of the pit, sawing out an oblong pattern until he had the mastodon freed from the sides of the pit in a huge block of ice. Then he turned off the X-raser.

Bud and Alvarez climbed down a rope ladder that had been suspended from the Sky Queen.

Tom said, "I've freed the beast fore and aft and at the sides without melting the ice. Now I'll do the same thing at the bottom, and it'll be ready for transport."

Bud nodded approval. "No fear of an avalanche now. The rest of the ice on this mountain can stay solid for another eon."

A massive hook fixed to a Tomasite cable was lowered from the Sky Queen. From the hook dangled six huge iron bands with long, sharp cleats at the ends.

Bud took the iron bands and fixed them at intervals across the top of the ice mass. Twisting the screws with a wrench, he forced the bar ends inward, driving the cleats into the frozen object.

"This will be like tongs lifting a cake of ice," he said, then grinned. "I'll bet this is the biggest chunk man has ever carried."

Alvarez led Tom around the outside of the mountain to the passage at the base of the pit. They went through and reached the bottom of the ice column. Tom used his X-raser to slice through it, on a plane parallel to the floor below the mastodon. Then he and Alvarez dashed out of the passage, back up to the cave.

"The ice core is loose. Bud," said Tom as he hurried over to the pit.

"Roger," Bud replied. "All's ready for action at this end, too."

Over his pencil radio, Tom gave the message "Haul away!" to the man in the Sky Queen. A giant winch began to exert force upward. The cable tightened and strained.

The ice core was lifted slowly from the pit floor. Then it was upended and brought from the cave through the open roof. It just cleared the sides.

"That is magnifico!" Alvarez exclaimed.

Tom was watching with bated breath, while Bud said, "It's a gorgeous specimen, Tom. I'm glad you didn't try the Transmittaton on it."

When the core reached the Sky Queen, automatic grapples drew a protective Tomasite covering over it. As soon as the burden was secured to the belly of the giant plane, the pilot headed for theUnited States.

Bud watched the Sky Queen disappear into the distance. "Tom, I hope that ice won't melt. Could be they'll have a lot of spoiled mastodon on their hands when they land."

Tom shook his head. "Don't worry. Bud. The temperature up there is way below freezing."

When Tom, Alvarez, and Bud reached the hacienda, they found Burkart waiting for them.

"Congratulations," the manager said to Tom. "Your plan worked. We nabbed fourteen Brungarians. They're being held until the federal police get here fromSantiago." "If you caught fourteen Brungarians," Bud pointed out, "one is still at large."

After checking, they realized that the Tall One had escaped. "I hoped," said Tom, "that the villagers would get him when he ran out of the cave. He must have slipped past during that free-for-all on the mountainside."

Everyone at the hacienda was excited and crowded around to congratulate the young scientist. Finally Tom waved them away.

Bud remarked, "It's onlyfour o'clock. What'll we do until sundown?"

"Eat,then sleep," Tom replied. "We solved the mastodon problem in record time. And Cliff Culbertson says the Racodio is operational. So we can spare a few hours before we tackle the P-E problem."

They went to sleep androse feeling fit. Darkness had already fallen.

"Now for the Transmittaton experiment," Bud said.

Tom shook his head. "Bud, I have no idea whether Tomasite is strong enough to withstand the radiation of a ghost in the receiving tank. Also, I've put in a small box to transmit radiation to our guest if it starts to lose its life support. I'd rather be in the control room alone."

"You mean you want a confidential talk with the ghost? Not a chance, genius boy. I intend to horn in on this little conversation."

Bud spoke flippantly, but Tom could see that he was determined to share the risk.

"Okay," Tom agreed.

They went to the control room and donned antiradiation suits and helmets with dark eye panels to shield them. Tom radioed the Swift space station, which gave him a fix on the area of the moon where the galaxy ghosts had been detected.

Tensely Tom set the Transmittaton at the proper angle. Bud watched without saying anything. Chow and the lab crew followed the experiment on intercom TV in the outer lab.

"Brace yourself. Bud," Tom advised. "Here goes!" He pressed the button hard.

A sharp crackling noise began. Growing louder, it turned into a roar that thundered through the lab. Then the noise died away.

"There's a strange patch of mist in the receiving tank!" Bud cried. "It's a globule just like those we saw in space! Tom, you've trapped a galaxy ghost!"

One by one Tom pressed the buttons opening smaller boxes he had put inside the big tank. Water squirted from the first—and instantly evaporated. Then a plant was exposed to the ghost. It withered. A cricket died in the radiation. A piece of fur disintegrated. A large bone turned into a heap of powder.

Tom removed the boxes and surveyed the results grimly. "The P-E is lethal to life on earth. But the Tomasite is holding firm against its radiation. We have a chance to talk to the creature."

The dials on the receiving tank revealed a steady, pulsating wave pattern. Tom fed it into a computer, which reported the pattern was a form of communication that could be analyzed and translated by the Racodio.

Tom programmed the wavelength into the translation device, and sent a message into the receiving tank.

"Can you understand me?"

The ghost pulsated rhythmically. Yes. Why are you holding me?

"We hope," Tom replied, "that you will carry a message to your companions on the moon. They are lethal to life on earth."

Tom paused to let the creature digest his message, then sprang the question, "Who are you?"

From galaxy Andromeda. Many of us. We must find a new home.

"Why have you come to our moon?" Tom asked.

We are looking for a spot in your solar system to suit us. None satisfactory so far. Plan to descend to your planet in two earth days.

"But you will kill every living thing on our globe," Tom protested. "You must not come!"

Willing to do as you request. Release me. I will rejoin companions from Andromeda. I will warn them not to invade earth.

Tom started to say "What a relief-" when a red alarm signal flashed near the Transmittaton.

"Something's wrong in the outer lab," Bud stated. "I'll see what it is."

Before he could move, the door banged against the wall violently. Chow appeared, open-mouthed with astonishment. Behind him came the Tall One, a mask over his nose and mouth. He was holding a gun in Chow's back.

"Hand over the ghost!" the Tall One snarled at Tom. "Otherwise, your friend here will get hurt!"

CHAPTER XIV

OVERPOWERED

AS Tom and Bud froze in shocked disbelief, the Tall One burst into laughter.

"The great Swift is surprised," he mocked.

Bud glared at him. "We thought you'd run all the way back to Brungaria, the way you high-tailed it out of the cave."

"Big talk from a hot pilot," the intruder sneered. "I left to put my secondary plan into operation."

Chow gulped. "Wal, I don't know as I care about bein' part o' your secondary operation. How's about movin' that shootin' iron? It's givin' me a real sharp backache."

"How did you know about this secret underground lab?" Tom demanded.

The Tall One smirked. "I hung around the village keeping out of sight of course, and listened to your men talk. I heard enough to figure out what you were up to at this hacienda and sneaked in. Two of my men have your helpers covered."

Tom winced. "We usually work under tighter security."

"You're too late this time. Swift. My orders are to get both the mastodon and the galaxy ghost."

"Thank goodness the mastodon is safely on its way to America!" Bud exclaimed.

The Tall One grimaced. "But will it ever arrive there?" he asked sarcastically. "Anyway, I'll make sure the ghost gets to our lab. Brungarian scientists are waiting for it."

"What do they intend to do with the P-E?" Tom burst out, worried.

"We will use it as a revolutionary super-weapon!" the lanky Brungarian boasted.

"How do you expect to manage that little trick?" Bud inquired.

"No harm telling you, now that you can't do anything about it. Our scientists have figured out a method of utilizing the radiation. It will be the ammunition for our big ray guns!"

"You don't understand what you're doing!" Tom warned. "We've just tested the effects of P-E radiation! It's lethal to all forms of life on earth!"

"It killed the plant and animal specimens we put in with it," Bud spoke up. "Even water evaporated. You'll be committing suicide if you turn this force loose on our planet!"

"Don't kid me," the Tall One sneered. He shifted his gun to the back of Chow's head. "Your friend was complaining about a backache. He'll get a headache unless you do as I say. Now put the ghost in the carrying case."

Chow blanched. "Tom, I have an idea this critter means business. I'd be obliged if you'd hand over the ghost before my head gets in the way of a piece o' flyin ' lead."

Tom saw he had no alternative. Reluctantly he turned on the Racodio. After a brief explanation he appealed to the Photo-Essence to enter the carrying case.

The pulsating globule in the receiving tank responded: "I understand. We do not wish anyone to be

harmed. I will transfer myself."

The ghost immediately began to shrink. It passed through a connecting tube like a wisp of smoke, and reappeared in the carrying case. Its glow shone through the Tomasite plating.

Tom pressed a button delivering an electrical charge. A small panel slid over the entrance to the carrying case, sealing it. Then he unscrewed the tube.

"Ordinarily I'd take a bow for the success of that transfer," Tom muttered to Bud. "Right.now I don't feel like celebrating."

"Give it here!" the Tall One ordered, jerking the carrying case from Tom's hand. "Now, everybody go into the next room."

He forced them to join the crew in the outer lab. With his pistol at Chow's back and his men's guns guarding the crew, the Tall One ordered, "Get into that corner, every one of you!"

The members of the crew looked inquiringly at Tom. "Do as he says," the young inventor cautioned them. Grumbling, the men gathered in the corner, with Tom, Bud, and Chow following.

The Brungarian suddenly whipped another gun from his pocket and fired at them point-blank. A bitter chemical odor filled the air. The victims' heads began to spin. A moment later the prisoners collapsed onto the floor and blacked out.

Some time passed before Tom's head began to clear. His eyes focused on the pile of men in front of him. He saw Bud and Chow stumbling to their feet. One by one the members of the lab regained consciousness.

"What happened, buckaroo?" Chow asked. "I've sure got a pain in my head, but my skull seems to be in one piece. What was in that gun?"

"Some kind of knockout gas," Tom told him.

"Where's our enemy?" Bud asked.

Tom looked around. "Gone, Bud, with the galaxy ghost. I wonder if he committed any vandalism in the lab while we were out cold."

They found everything in good condition except the Transmittaton. It was severely damaged.

"The Tall One must have broken this dial panel by pounding it with the butt of his gun,"

Tom said. "I'll need at least two days to repair it. But what counts right now is to do something about the stolen galaxy ghost. This is a crisis. Those Photo-Essences on the moon are set to invade the earth day after tomorrow!"

"And the only way to stop them," Bud added, "is to get the carrying case, release the captive ghost, and let it return to the moon. It must stop the others from putting their invasion plans into operation."

One of the engineers spoke up. "We don't even know where to begin looking. And while we're searching, who knows what that stupid Brungarian will do with the P-E?"

Tom pursed his lips. "Ralph, you just hit the nail on the head."

"I did?"

"Yes. The Tall One may not understand the danger. But the Brungarian leaders should. I'll radio their capital, explain the problem, and ask them to order their agent to release the ghost."

He spun the dials of his powerful short-wave radio set. Identifying himself to the Brungaria operator, Tom asked to speak to the prime minister.

"State your business. Swift," said the voice the other end when the connection was made.

"The galaxy ghost must be released if a disaster to humanity is to be prevented," Tom said. "Please relay that order to your agent.

The man snickered. "Negative, Swift. We will not be fooled by your propaganda. We will neither release nor return the ghost."

The connection clicked off.

"What now, Tom?" Bud asked.

"There's nothing we can do here in the lab. Let's go upstairs and see if anything has developed there."

The boys found Mr. Swift, Castilla, and Burkart reviving from the effects of the same knockout gas that had dropped those in the lab.

"The Tall One!" Castilla gasped. "He burst in here and covered us with his gun. He used my phone to get in touch with Brungaria."

"What did he say?" Tom asked.

Castilla frowned thoughtfully. "He spoke in a low tone to prevent us from hearing. But I did catch a reference to Voss and Valpo."

"Valpo is Chilean slang forValparaiso," Burkart explained. "A seaport on the Pacific, northwest of Santiago."

"When the man put down the phone," Castilla continued, "he pulled a second gun and sprayed us with some sort of gas. We became unconscious."

Tom quickly described what had happened in the underground lab. Then he added, "Our best bet now seems to be the Valpo lead. Bud and I will fly there and see if we can pick up the trail."

Bud nodded. "Maybe someone named Voss lives in Valpo and is part of the Brungarian conspiracy. The Tall One might be taking the ghost to him."

The boys would leave the next morning. They had just dropped off for their first full sleep in several nights when an urgent message arrived for Tom from the Sky Queen.

"We have been trying for hours to get you," the radio operator said. "A lot of our equipment was sabotaged before take-off. It malfunctioned while we were still over Chilean waters. The giant winch was tampered with, so the grappling irons sprang open. Your mastodon dropped off and fell into the Pacific Ocean!"

CHAPTER XV DESPERATE DIVE

TOM was speechless over the loss of the mastodon, but in a few moments he asked the Sky Queen's radio operator, "Where is the Flying Lab now?"

"We had to come down in a wild spot," the operator reported. "Something went wrong with our lifting power. I believe that has been repaired now. Shall we go home or can you use us?"

"You'd better take the Flying Lab to Shopton for a thorough inspection. I'll call if I need you."

"Roger."

Tom rushed to Bud's bed and shook him awake. "Emergency! Follow me," he ordered.

Half asleep. Bud staggered after Tom to the lab. Mr. Swift was there, working on the damaged Transmittaton. Tom broke the news about the loss of the mastodon from the Sky Queen and the sabotage of the machinery.

"I suppose they couldn't rouse us because we'd been gassed by the Tall One."

Mr. Swift's face clouded. "This is very disturbing. There's little doubt in my mind that the Brungarians had a hand in this sabotage."

"It puts us back where we started," Tom observed. "We still have to End both the mastodon and the galaxy ghost."

Bud looked puzzled. "I should think the mastodon was gone for good."

"Not necessarily. Bud," Tom replied. "Of course salt water normally melts ice. But this particular cake of ice, with the tremendous weight of the mastodon inside, must have plummeted to a depth where the water is frigid enough to keep the ice from melting."

"Right," his father agreed. "The mastodon is undoubtedly still in one piece. The big question is-where?"

Mr. Swift frowned. "I suggest that you boys stay on the more important problem, the missing P-E. I'll radio the Sky Queen to pick me up and fly to the general area where they lost the mastodon. I can use

the Sea Dart to search the ocean floor for it."

The Sea Dart was a two-man submarine that Tom had invented for deep-sea exploration. Protected by Tomasite and powered by jets, it could go deeper and stay down longer than atomic subs. At present the jetmarine was aboard the Flying Lab with another of Tom's inventions, the diving seacopter.

"Of course a couple of the Sky Queen crew could hunt for the mastodon," Mr. Swift went on, "but raising it is going to be tricky. I want to go down and look over the situation myself."

Tom nodded. "I'm glad. As for the Transmittaton, Culbertson can repair it."

The next morning Burkart drove Tom and Bud to the valley where they had left their jet. Minutes later the boys were in the air headed forValparaiso. They landed at the airport and took a taxi to the city.

"Let's begin on the waterfront," Tom said.

"Why not, Tom? It's where most of the action is in Valpo."

The boys strode to the dock area through busy streets filled with throngs of people in colorful native costumes. Freighters were discharging their cargoes. Beyond the harbor was the broad expanse of the Pacific.

Tom and Bud stopped to eat at a restaurant overlooking the ocean, thinking they might pick up a clue. The sign that had caught their attention read: LOBSTERS FROM JUAN FERNANDEZ ISLAND.

"That's Robinson Crusoe's desert island," Tom commented as the boys were being served. "Daniel Defoe heard about a fellow who had been marooned there, so he put the island into his story."

"If Robinson Crusoe and his man Friday had lobsters this good every evening, they couldn't have had too rough a time," Bud replied.

As the Indian waiter started collecting the dishes, Tom asked him if he had ever heard of a man named Voss.

"Si, everyone in Valpo has heard of Senor Voss," the waiter said. "He is a rich Australian who lives in Vina del Marnear the big rocks on the beach."

After paying their bill, the boys took a taxi to the beautiful resort area. Getting out a half mile from the rocks, they slipped quietly through the sand, and stationed themselves behind a dune where they could watch the Voss house. Tom and Bud could not see inside because the building had porches on every side, with bamboo blind pulled down.

"We'll stay here and keep the place under surveillance," Tom decided.

Nothing happened all afternoon. But as night was falling, a rowboat came silently to the beach. Offshore a motorboat was anchored. Two bearded men jumped from the rowboat, pulled it onto the sand behind the rocks, and strode up to the house. Both were short and powerfully built. They knocked and were admitted.

A light switched on. Through the bamboo blinds Tom and Bud could see three silhouettes, two short and squat, the third medium-sized.

Bud grabbed Tom's arm as an elongated shadow joined the others. "The Tall One!" he hissed.

"And the carrying case!" Tom whispered back. "He's just put it on the tabletThe ghost's still glowing inside!"

Stealthily the boys crept between the sand dunes, reached the side of the house undetected, and crouched under a window. Their hearts were beating wildly.

The first snatches of conversation identified the group inside. The Tall One's name was Tokatyan.

The medium-sized man was Voss, who allowed Brungarian agents to use his house as headquarters. The other two men were brothers named Ivan and Demetri Stasha. Both ranked high among the scientists of Brungaria.

Suddenly the Tall One cried out angrily, "What's wrong with you, Voss? Losing your nerve?"

"I don't like it," Voss quavered. "My information from Brungaria states that Swift says the galaxy ghosts are lethal. They're getting ready to invade the earth! Everyone will be killed if you don't return the ghost."

The other three laughed harshly.

"That's just a Swift trick," said Ivan Stasha. "He's trying to outwit us."

"Swift wants to frighten us into returning the P-E," said the other Stasha. "Fat chance."

Tokatyan gave a sinister chuckle. "Voss, the only good tricks are Brungarian tricks. We've just pulled one of the sweetest you'll ever see. We got the mastodon away from the Swifts' Sky Queen."

The Tall One went on to tell how he had learned about the Flying Lab from a villager who did odd jobs for the crew. "I sent an agent, who is an expert machinist, disguised as this villager. He sneaked aboard the Sky Queen. The agent sabotaged the grappling mechanism by putting a tiny deactivator inside the giant winch controls. He also tampered with the ship's lifting controls. Then the saboteur sneaked out."

Tokatyan snickered. "My man took a good look at the flight chart. I had the route taped all the way to theU.S.A.I triggered the deactivator at the right time. The winch lost its power. The mastodon fell into the Pacific just where I want it. Presto!"

"What good is that?" Voss complained. "The mastodon is gone."

"Correction. Temporarily gone. It will be rescued very shortly by a Brungarian sub."

Ivan Stasha growled, "That's enough explaining, Tokatyan. We should already be on our way to Tierra del Fuegowith the ghost."

"Our lab is in a remote spot," his brother argued, "but we can't depend on it going undetected for long. We need to harness that P-E radiation for military purposes before anyone down there gets wise to us."

The Tall One agreed. "We're going to plan our strategy, Voss. You stay right here until we call you."

Voss grumbled, but obviously he was afraid to refuse. The others went into the next room and shut the

door.

Tom and Bud noiselessly climbed the steps and stopped under the window where they could see the shadow of Voss. The man was pacing nervously back and forth.

Tom scratched on the bamboo slats. Voss opened them a slit. "Who's there?" he murmured in panic.

"Friends," Tom replied. "We want to help you." Quickly he explained the situation.

Tom asked Voss to get the carrying case and bring it outside.

"Meet me on the beach at the big rocks," Voss muttered. "I'll grab the case and make a run for it."

Tom and Bud hastened across the moonlit beach to the place where the boat was beached. A minute later they saw Voss emerge from the house with a cloth bag.

"He must have the carrying case with the ghost inside that bag," Tom remarked.

"He'd better get a move on," Bud said. "Here comes trouble with a capital T."

The three men raced from the house in pursuit of Voss. He was a poor runner and the gap between them narrowed with every stride. Voss turned and threw the cloth bag at them and ran on, carrying the glowing carrier by the handle. The clumsy attempt to slow down his pursuers did not work.

"We'd better get set to take the offensive," Tom said to Bud. Tom scrambled to the top of the nearest high rock. Bud followed him.

As Voss pounded past, the other three were at his heels. Tom leaped down, striking Tokatyan between the shoulders. He and the Tall One hit the ground together.

At the same time Bud hurtled into the Stasha brothers. The three went down in a tangle of bodies.

"Run, Voss!" Tom shouted.

Panicking, the Australian began to climb the rocks. Tokatyan and one of the Stashas broke loose and charged after him. Tom followed rapidly.

On the peak of the highest rock, Tokatyan seized Voss by the shoulder. With his free hand, the Australian swung the ghost carrier in a wide half circle and let fly. The glowing cube case arched over the cliff and hit the water with a splash.

"Dive after it, Swift!" the Australian cried out. "The water's deep enough!"

Tom glanced down at the waves breaking against the sheer side of the rock. He gave a powerful spring and made a perfect dive into the ocean.

He came up and swam toward the Tomasite container, which was bobbing up and down. Catching the carrier by the handle, Tom began towing it to shore.

The put-put of a motorboat echoed over the water. Frantically he tried to submerge with the carrier in the hope of not being seen. The container was too buoyant to go under.

As Tom struggled with it, the motorboat came roaring down on him!

CHAPTER XVI THELANDOFFIRE

AT the last moment Tom released the carrier and dived below the surface. The churning of the motorboat over his head was blinding and frightening.

"That was a planned hit-and-run accident," he thought, "only I didn't get hit."

Kicking back to the surface, Tom was dismayed to see the craft racing off with the galaxy ghost on board. He could see Tokatyan and the Stasha brothers chortling with glee.

Tom began to swim to shore. Halfway there he met Bud coming toward him. Bud explained he had seen the three Brungarians board their motorboat from the rowboat and head for the spot where Tom and the ghost had hit the water.

"They got away with the carrier," Tom said as he and Bud, puffing, reached the sand. "How's Voss doing?"

Bud pointed to the tanned, hatchet-faced man seated on one of the rocks, shaking from an attack of nerves. When he calmed down, Voss confessed he was completely disenchanted with the Brungarians.

"Even if they don't believe you, they shouldn't take the chance of causing a catastrophe on earth," he insisted.

"Have you any idea where their lab is located inTierra del Fuego?" Tom asked.

"Yes, I've been there. The one-story building belonged to a gold miner who died many years ago. It's about ten miles south of Sombrero."

"Sombrerois where the big Chilean oil strikes were made," Tom commented.

Voss nodded. "You keep going until you see low, rounded twin hills beyond a mass of scrub vegetation. The Brungarian lab is on the side of the east hill in a clump of tall calafate bush near an old Indian trail. You can land on a level spot two miles away."

"When will Tokatyan and the Stashas be there?" Bud inquired.

"They're flying down in a private plane as soon as they get to the airport. You can follow them," Voss added, "but I'm getting out. By now, those three have alerted the Brungarian Consulate in Valpo by

radio. A hired assassin may be on my trail. I'm on my way home-toAustralia!"

Tom and Bud hurried with Voss to his house. Their host threw a few things into a suitcase and made sure his passport was in order.

The boys changed into dry clothes Voss was leaving behind. "Not a bad fit," Bud remarked. "Our friend from Down Under's just about our size."

They started for the Valparaisoairport with Tom at the wheel of Voss's car because the Australian was too unnerved to drive.

"Pretty lonely stretch of road," Tom said when they had gone a couple of miles.

"The lights of only one other car are visible," Bud commented. "That one down the pike headed toward us."

The other car was traveling at high speed. "He's driving in the middle of the road," Tom muttered.

"He's going to force us off the road!" Voss gasped hysterically.

"And all we have is a steep sandbank on the right-hand side!" said Bud.

Fifty yards from them the other driver cut to the left at a sharp angle.

Tom stepped on the gas, spun the wheel sharp right, then sharp left, and gritted his teeth as he curved along the edge of the sandbank. The oncoming car careened past the rear bumper with inches to spare!

A horrified look appeared on Bud's face as he looked back. The other driver had lost control of his vehicle. It plunged over the edge and came to rest upside down on a sand dune, its four wheels spinning wildly.

"Any survivors?" Tom gulped.

"It's too dark to see," Bud answered.

"Another car has stopped up the road and four men are getting outto investigate . They may be confederates. Anyway, they can handle rescue operations without us."

Tom sped on to the airport. He and Bud reported the accident to the police, then they escorted Voss, pale and trembling, aboard a jet plane bound for Australia.

"Give our regards to the kangaroos and the koala bears," Bud quipped.

"Let us know if you strike gold in the Outback," Tom said with a grin.

Voss smiled. He was beginning to feel better already. "I'm headed forSydney, my old hometown. I intend to lie on the beach and forget I ever heard of Brungaria."

The boys waited to see the jet safely in the air. Then Tom and Bud took off in their own plane for the long trip south to Tierra del Fuegoat the southern tip of South America. Their flight plan took them along the Pacific coast in bright moonlight.

"What a fascinating geographyChilehas," Bud said.

"Nothing elselike it in the world. Bud. You're looking at a land more than twenty-six hundred mileslong, and yet only one hundred ten miles wide on an average. No wonderChilehas subtropical climate in the north, while it's frigid in the south."

"I've read that Chilean industries run from steelmaking to sheep farming," Bud remarked.

"There's Chilean steel right now. Bud." Tom pointed to the blazing open-hearth furnaces of the great Huachipato steelworks nearConcepcion. "You'll find the sheep when we reach the south."

A little later the boys saw hundreds of tiny lights scattered along several dark waterways. As Bud turned the aircraft inland, he commented:

"We're passing overValdivia. That meansChile's famousLake Districtis nearby. We may as well take a look at it."

"We already haveMountOsornoin view," said Tom. He was referring to the snow-capped volcano rising aboveLakeTodos losSantos. "No wonder travelers compare Osorno toJapan'sMountFujiyama. They're both symmetrical cones."

The plane flashed over the shimmering moonlit water and across the towering top of the crater. Tom and Bud saw a broad range of forest underneath their wings. They flew on to the heavily indented Pacific shoreline of southernChile.

The magnificence of the scenery below was breath-taking. Jagged peaks pushed high into the air. Remnants of glaciers hung from the cliffs.

"The Torresdel Paine," Bud marveled. "What a sight from the air!"

"Don't get excited and lose control of the plane, pal," Tom commented. "You'd find a forced landing down there a trifle tricky."

"Don't say that even in fun," Bud protested in mock horror. "It would be a crash landing with the accent on 'crash.' I'll stay upstairs, thank you."

The Torresdel Paine disappeared behind them. "We're over Magallanes," Tom noted.

"That's the province on the lower tip of Chile," Bud remarked. "Those must be the lights of Punta Arenas up ahead—the southernmost town on the South American mainland."

The land below showed a pattern of rounded gray rocks with broad pastures in between. Big estancias, sheep ranches, proclaimed Magallanes to be good grazing country. Flocks by the thousands could be seen on the hillsides.

The moonlight shone on farmhouses, warehouses, and shearing sheds. The broken coastline permitted the sea to push inland and form long, deep fjords.

"Punta Arenas, capital of the province," Bud went on. "The lights are bright. Looks like a nice city."

There was a broad inlet of water at the edge of Punta Arenas. Lashed by heavy winds, the water rose and receded in massive swells.

"TheStrait of Magellan!" Tom cried. "And that's Tierra del Fuegoon the other side. It's the fabledLandof Fireas Magellan's men called it when they saw the Indian bonfires along the shore."

"TheLandofFireis still a good name, Tom. Just look at the number of fires blazing in the darkness over there,"

Tall jets of flame shot upward from hundreds of flare pipes at theSombrerooil fields. This was the method used for burning off surplus gas.

"The twin hills Voss mentioned should be visible," Tom said. "There they are. Bud. Now, we want the one to the east."

Bud flew over the hill. The head wind had picked up and now whistled against the fuselage.

"Down there," Bud said, nodding to the level spot Voss had described. "Think I can land her?" He raised his voice above the deafening wind.

"Power approach," Tom replied.

His friend nodded again and within minutes had landed smoothly.

"I think I'll leave all the piloting to you hereafter," Tom said with a laugh as they taxied to a stop. "Great trip."

Seconds later the boys were walking along the old Indian trail toward the clump of calafate bush Voss had told them about.

"That stuff looks like barberry bush to me," Bud observed. "It sure grows high."

Tom agreed as they surveyed the area. Here and there cattle were huddled around the natural-gas fires for warmth because the raw wind was up to a steady forty to fifty miles an hour.

"It's winter down here," said Tom. "The nights are long. We won't see daylight for an hour or so."

Bud halted as they advanced up a shallow depression. "There's the shack, Tom. And that plane in the field must be the one the Brungarians flew from Valpo."

Tom and Bud crouched and surveyed the area. After making sure there were no guards around, they approached and peered through a dusty window. A large fire burned in the fireplace, but the house appeared to be vacant.

"No one here," Bud murmured. "Maybe Tokatyan and the Stashas are inSombrero."

"Let's chance it," Tom replied. "We'll see if we can find the ghost carrier, and take off before they get back."

The boys hastily entered the unlocked front door and walked inside. The only sounds were the creaking of floorboards under their feet and the howling of the wind around the house.

"The carrier isn't here," Bud declared after scouting the room. "Think it can be in the plane?"

"Let's look. Bud. It's high time for us to get out of here, anyway."

As the boys stepped quickly to the front door, it burst open. The Tall One entered, followed by the Stashas. All three had their arms full of logs for the fire.

The Brungarians dropped the logs. Roaring with rage, they charged at Tom and Bud!

CHAPTER XVII SNARED!

IVAN Stasha pitched into Tom. The two wrestled, straining muscle against muscle, until they collided with a small table and fell. It splintered under their weight. Tokatyan tripped Bud, grappled with him, and they rolled over and over on the floor.

The battle raged fiercely for a few seconds. Then Demetri Stasha picked up a big log. He gripped Tom by the back of the collar.

"Stop!" he growled, raising the log menacingly. "Do not hurt my brother!"

Outnumbered, and seeing the futility of further resistance, Tom and Bud surrendered. The three Brungarians tied them with rope, and then held an animated council of war in their own language.

"How did those boys know where to find us?", Ivan Stasha demanded furiously.

Tokatyan became sulky. "Don't look at me. I never mentionedTierra del Fuego. Come to think of it, you're the only one who did. Maybe they overheard you."

"This isn't getting us anywhere," growled Demetri Stasha. "If young Swift knew where we were, his smart father probably does too. We're likely to have visitors dropping in on us, including the Chilean police."

"We'll have to change our plans," the Tall One said. "This place is too hot for us now. What shall we do?"

"Stay here for the moment," Ivan Stasha replied. "I'll go out to the plane and radio headquarters to reroute our scientific equipment to our other hideout."

He disappeared through the door. Ten minutes later he was back. "Everything is arranged. We'll shift our base of operations."

Tokatyan gestured toward Tom and Bud. "What do we do with these two snoops?"

"Take them with us," Ivan replied. "Special plans are being made for them."

The three Brungarians carried their prisoners to the plane and loaded them into the passenger section. The aircraft roared across the open field, then rose sharply into the air.

Tom twisted at the ropes around his wrists. "The way they've trussed us up, I feel like a chicken ready for the spit," he whispered to Bud, who was lying beside him. "Can you hear what those three guys in the cockpit are saying?"

"Something about an estancia in Magallanes. Make sense to you?"

"It must mean they're taking us to a sheep ranch on theStrait of Magellan."

The plane began to lose speed and altitude. It came down for a bumpy landing. Before the aircraft stopped rolling, Tokatyan clambered into the back and pulled a couple of blankets from under a seat.

"You two are good at figuring things out," the Tall One sneered. "See it you can figure out where you are."

He threw the blankets over their heads and tied them in place with string. Half-smothered, the boys were roughly lifted, carried outside, transported into a building, and dropped onto a wooden floor.

Deft hands unknotted the strings of the two blankets and they were jerked off. The boys stared into the face of a lynx-eyed man with a black beard kneeling beside them.

Captain Igor Svornin!

"How's your spaceship. Captain?" Tom asked nonchalantly.

Bud added, "Flying again after your visit to the Swift space station?"

Svornin gave an ugly smile. "Now it is my turn to play host to you. Rest assured, I shall be more wary than you were. I have planned something very special for such honored guests. Nothing will interrupt the festivities. We are at a sheep ranch used by us Brungarians as a secret service base."

"So, the truth finally comes out," Tom said. "You're a secret service agent for your government." Tom saw the glowing carrier standing on a rough wooden table.

"But of course," Svornin answered. "I am commandant of one section of our spy network. My assignment was to get a sample of the P-E. Unfortunately our scientists were not able to capture one. However, your ghost log was most helpful in revealing your research. I decided to let you capture a P-E for us. And you did!"

"Tell us about the mastodon," Bud suggested. "What part does the Ice Age monster play in your little scheme?"

"You should ask Tokatyan. His team had that assignment. They didn't do a very good job. It was extremely difficult to train that Indian to play the part of the Snowman of theAndes. And after all our

labor, Tokatyan allowed you to take the mastodon away from us."

Svornin threw a disdainful glance at the Tall One.

"Captain, I was prepared for such an accident," Tokatyan said coldly. "I had the Sky Queen's grappling system and lifting power sabotaged just in case. And my foresight was rewarded. The mastodon is at the bottom of the Pacific waiting for our sub."

"Are you sure you will not mismanage the project again?" Svornin asked sarcastically. "Might not the senior Swift snatch the beast from under your nose? Remember, ourspies report he is looking for it in that remarkable Swift jetmarine."

"The Sea Dart doesn't matter," Tokatyan insisted. "No underwater craft can withstand the force of the new secret weapon we have aboard our sub."

Tom winced. What danger might his fatherbe heading into in the depths of the ocean? The two Brungarians walked away.

Tom and Bud looked around. They were in the main room of a large sheep station. Through the window on the opposite wall they could see a large flock of sheep grazing on top of a green hill. Heavy logs blazed in a stone fireplace.

The Brungarians sat down at a long wooden table near one end, and began to devour a meal that had been grilled over the fire by the cook at the ranch.

"Obviously, we're not the men who came to dinner. Bud," murmured Tom. "I could eat a horse, not to mention those lamb chops they're consuming."

"I could even do with a generous helping of Chow's leftover mushrooms, Tom. But let's not give these men the satisfaction of knowing we're hungry."

The boys tried to turn their minds to things other than food during the remainder of the meal. They were relieved when it ended. Finally, the diners stood up, and the scraps were removed by a servant.

"Get those two Americans ready for a journey," Svornin ordered. "I am taking them to a special place I have been thinking about ever since I learned we had captured them."

Tokatyan looked doubtful. "Whatplace. Captain? You haven't told us what or where it is."

Svornin glared as he answered, "It is a place from which they will not return, I promise you."

"I don't like the idea. Captain," the Tall One insisted. "I remember how Voss betrayed us. This time I would like to do the job myself. If I dispose of them, I'll know they're gone for good."

"If I should permit you to watch what I do, will that satisfy you, Tokatyan?"

"Certainly, Captain."

"All right. The Stasha brothers can come too. Have six horses saddled," Svornin commanded a member of the staff. "We are going through rough country, too rough for an automobile."

Ivan Stasha tapped the glowing cube container. "Shall we leave this galaxy ghost here at the ranch until we get back?"

"That would be foolhardy," his brother replied. "The ghost could be sold for a princely sum. High bidders would come from all the nations disturbed by Swift's foolish report of an impending invasion of Photo-Essence from outer space."

"Besides," Tokatyan put in, "we cannot trust the staff at this ranch. Any one of them might abscond with the P-E and offer it for sale."

"We will take the case with us, then," Svornin decided. "I know where we can hide it without fear of its disappearing."

Four members of the ranch staff were summoned to untie the boys' feet and push Tom and Bud outside. They were placed in the saddles of two horses. Blankets were thrown over their heads to keep them from seeing. The creak of leather indicated that the Brungarians had mounted. Svornin told the others to follow him into an adjoining pasture. Presently the bleating of sheep became so loud the boys knew that it must be a flock of hundreds. The horses were pulled to a halt.

"See here!" Svornin said. "This will hold the cube until we want it."

Hoofbeats told Tom and Bud that their enemies were gathering for an inspection of the hiding place.

"I believe you're right. Captain," the Tall One agreed. He was echoed by the Stasha brothers, who said they could leave the ghost there until the arrival of their scientific equipment.

There was a sound of fumbling with the case, then a backing of horses, and the cavalcade resumed its journey at a rapid canter.

After an hour's ride, Svornin reined in his mount. Tom and Bud were pulled down, and Tokatyan yanked off the blankets. The Stashas carefully trussed up the boys again, and they were deposited on the ground.

The frigid wind cut the boys to the bone. For mile after mile nothing but scrub vegetation met the eye.

Svornin sardonically smiled at his captives. "Do not bother calling for help. There is no one close enough to hear. You are on the pampas, not far from the Argentine border, and miles from the nearest habitation."

"Those are your only neighbors," he added, and pointed at some huge birds circling lazily overhead in the sunlight.

"They are caranchos," Tokatyan said. "South American vultures. They are among the most dreaded of the continent's carnivorous species, and are hunting for prey. When you die-"

Svornin turned in the saddle. "Good-by, Swift," he said with a mocking bow. "Good-by, Barclay. It touches me that we will never meet again."

Reining his horse back on its haunches, he wheeled and galloped off. Tokatyan, the Stasha brothers, and the boys' horses followed. The sound of the animals' hoofbeats diminished and ceased long before their figures disappeared beyond the horizon.

Silence fell over the pampas except for the wind beating through the scrub. Every few seconds a dark shadow crossed the spot where Tom and Bud lay, famished, thirsty, and exhausted. The huge-winged caranchos were flying between them and the sun. Squinting up at them, the boys could see their sharp beaks.

Tom repressed a shiver. He had read about these birds. They were known to peck out the eyes of a weak lamb or a sheep. They attacked any animal which they found dying on the ground.

As Tom and Bud watched in horror, the loathsome vultures began to circle lower and lower toward them!

CHAPTER XVIII VULTURE PREY

TWO of the giant birds landed on the ground near Tom and Bud.

"They're after us!" Tom shouted in desperation.

"We'll be pecked to death!" Bud said grimly. "I don't want to be on any vulture's menu!"

"That's what Svornin had in mind," Tom replied.

The boys struggled with the ropes that bound them. The harder they pulled, the deeper the cords cut into their flesh.

"How about sawing our way out, Tom?" suggested Bud. "I have a penknife in my pocket, and so have you. If only we can reach one, we'll have a chance to cut the ropes."

Bud rolled over and over in the dust, trying to dislodge the knife from his pocket. Flapping wings told him he had scared off the two birds that had landed a few yards away. They rejoined the rest circling in the sky.

Bud lay on one side, heaving from exertion. "Wow, am I glad those caranchos flew away," he said. "But they'll be back. And my penknife is still stuck in my hip pocket. Think of something, Tom."

"I already have. Bud."

Tom pulled himself up on his knees. Lowering his head, he flipped into a forward somersault. A metallic object fell from his breast pocket and lay gleaming in the sunlight.

"You've done it!" Bud cried out.

Tom rolled over, and though his hands were tied behind his back, managed to pick up the knife. He fumbled with the blade until it snapped open.

Bud maneuvered his wrists into position near the knife. Holding the handle firmly, Tom pressed the cutting edge of the blade against the section of rope between Bud's wrists, and held it fast as Bud worked his hands back and forth.

The sharp steel bit into the rope. First one strand broke, then another, and suddenly the bonds parted with a snap.

"Thank goodness," Bud muttered. He quickly freed himself. Then he untied Tom. The boys stood up, rubbing their wrists to restore circulation. The vultures, seeing that Tom and Bud were no longer helpless, flew off.

"Adios, amigos," Bud murmured.

Tom took out his pencil radio and contacted the Sky Queen, which was circling off the coast of Chile. He described a rocky protuberance shaped like a horse's head on the Strait of Magellan. He had noted this landmark during the flight to Tierra del Fuego.

"We're headed there right now," he informed the Flying Lab's radioman. "Bud and I expect to have the galaxy ghost with us when we arrive. Order the seacopter to rendezvous with us. Tell the pilot to stay until we're aboard."

The seacopter was Tom's combination flying and underwater craft. It could take to the air like a helicopter, and plumb the depths of the ocean like a sub.

"Another thing," Tom went on. "We'll need a can of Soluweb."

This was a revolutionary liquid spray he had concocted in his laboratory at home. Soluweb—consisting of two liquids that were mixed in spraying—was so powerful it could dissolve any metal, alloy or plastic, even super-durable Tomasite.

"Roger,"came the response from the Sky Queen. "Don't sign off yet. We have some news."

"Where's it from?"

"Your father. He found the mastodon on the floor of the Pacific, and is about to begin rescue operations with the Sea Dart."

"Great! What else is there?"

"A report from Swift Enterprises. The university has nearly completed the receiving tank for the mastodon."

"Perfect!" Tom exclaimed. "I'll use the Transmittaton if it's necessary. Anything else?"

"That is all."

"Roger. Signing off." Tom returned the pencil radio to his pocket.

"I got the gist of the conversation," Bud said. "Now we're after the galaxy ghost."

"Correct, pal. These horse tracks left by Svornin and Company are worth following. They should lead us to the estancia and the pasture."

The boys walked for about an hour. Just when they lost the hoofprints on stony terrain, they ran into a herd of sheep and two shepherds on horseback. The men had a couple of extra ponies which they agreed to rent. Tom promised to leave the mounts at Horsehead Point on the strait.

"We're trying to catch up to a group of riders," Tom said. "Have you seen them?"

"Si," replied one of the shepherds. He pointed southwest. "They went into the valley between those two hills. I think they were heading for the estancia on the strait. Go that way. You cannot miss it."

Tom and Bud mounted the ponies and galloped off. Some hard riding brought them by nightfall to the outer fence of a sheep ranch.

Tom slowed to a walk, guided his pony into a copse, and dismounted. Bud followed. They tied their mounts, parted the leaves, and surveyed the lay of the land. Some distance ahead they could see the lights of a low sprawling building.

"We'd better not move any closer to the ranch house," Tom advised.

"No problem," Bud answered. "We can circle around and get into the pasture from the opposite direction. Then all we'll have to do is find the carrier. If the ghost is still where Svornin put it, we should be able to scoop it up and get away before the Brungarians know we've escaped."

"Our first clue will be the bleating of sheep," Tom said as they gave the ranch house a wide berth and reached the pasture.

"I hear them over there." Bud pointed to a stretch of pasture behind the shearing shed. "Let's try that tall rocky grotto. It's what I'd choose for a quick hiding place."

"So would I. Come on. Bud. We'll find out whether it's really the spot where they stopped before escorting us out onto the pampas."

The boys strode through the pasture between the sheep, and entered the grotto. Bud turned on his flashlight. Rocks and boulders littered the ground. Stony walls ten feet high formed a three-sided room with an opening which faced the pasture. Here and there hardy flowers pushed through crevices, clinging by their roots to what little soil there was in which to grow.

"I don't see---" Bud started to say.

"Psst! Up there!" Tom interrupted him. "That objecton the ledge covered by a blanket! It's the right size and shape!"

The boys clambered to the ledge. Tom jerked off the blanket.

The Tomasite carrier with the pulsating P-E was revealed.

"We have the ghost back." Tom grinned in relief. "Now to get it away safely."

"I hear hoofbeats!" Bud warned. "Somebody's outside the grotto!"

Loud yelling erupted. Bud jumped down, ran out, and saw a horseman galloping toward the ranch house. Tom followed, carefully carrying the ghost with him.

"Help! Help!" the man shouted. "Thieves!"

"He spotted us!" Bud exclaimed. "There's only one thing for us to do now—leave a lot faster than we came."

Tom and Bud ran across the pasture at top speed, reached the copse, and untied their mounts. They vaulted into the saddle and galloped off.

"Head for the high rocks along the strait," Tom called, holding the carrier tightly under one arm. "We'll be able to reach Horsehead Point where the seacopter is due to arrive. It might even be there now."

Bellowing voices echoed behind them. Hoofbeats clattered over the gravel. Looking back, they saw four riders cutting through a gully, obviously determined to head off the fugitives before they could reach the strait.

Tom pivoted his mount on its hind legs. "Come on. Bud. This is a race for life!"

Loosening the reins, he urged his pony toward a pile of rocks, cleared them in a single bound, and rode headlong across a level space between two mounds.

On the opposite side was a steep ravine. Holding his pony back on its haunches with a firm hand, and maintaining his grip on the ghost carrier, Tom negotiated the slope in a series of plunging descents that sent the earth flying from under the horse's hoofs. Slackening the reins again, he charged full tilt out of the ravine toward Horsehead Point. High abovehe saw the blinking lights of the seacopter.

Meanwhile, Bud took an alternate route. He rode skillfully along a ledge with a sheer drop of fifty feet on one side. He leaped a series of dead tree trunks and rejoined Tom beyond the ravine for the final dash toward the summit.

At the edge of Horsehead Point, Tom and Bud threw themselves from their ponies. Scrambling up the rock, they saw the seacopter scouting the area in search of them.

Bud began to signal frantically with his flashlight. Tom made contact by means of his pencil radio. The seacopter pilot saw them and zoomed in their direction. A rope ladder was lowered from the craft.

By now the Brungarians had reached the foot of Horsehead Point. They came scrambling up in hot pursuit.

The ladder from the copter did not quite reach the rock, but dangled out over the water. Tom could not wait for the pilot to maneuver closer. He leaped out from the rock and caught hold of the ladder with one hand. Clutching the handle of the ghost carrier with the other hand, he began to climb up.

Looking back, Tom could see their pursuers reaching out for his pal.

CHAPTER XIX TRAPPED!

KICKING away from the reaching fingers of his pursuers.Bud leaped out into space. With one hand he grasped the lowest rung of the seacopter's ladder, then pulled himself hand over hand up the other rungs. Finally he managed to get a foothold and quickly climbed the swaying ladder.

The boys dropped onto the floor of the copter, puffing from exertion. The ship soared off, leaving a band of raging, frustrated Brungarians on Horsehead Point. The men were carrying rifles, and sent a fusillade of bullets after the craft, trying to bring it down. Whizzing lead ricocheted off the Tomasite hull.

"That's a harmless barrage," said Ted Brice, the pilot. "They couldn't possibly penetrate this plastic."

Ted was one of the young airmen at Swift Enterprises. He could always be relied upon to handle dangerous flying assignments.

"Ted, get some altitude," Tom urged.

As the seacopter zoomed upward, Tom placed the carrier with the galaxy ghost next to the door, then picked up the spray can of Soluweb.

"We can't communicate with the P-E because we don't have the Racodio," he told Bud. "But this ghost knows what it has to do. The sooner we speed it on its way to the moon the better."

The young inventor explained to the others what he intended to do. Bud nodded and took up a position by the door. Tom lifted the Tomasite carrier by the handle and cocked the Soluweb spray in the other hand.

When the seacopter reached a level altitude, Bud pushed the door wide open. Tom flung the glowing case out and at the same time engulfed it with a large dose of Soluweb spray. Instantly the Tomasite case dissolved. It was far enough away, however, so its radiation did not hit the boys. A pulsating globule streaked up into the sky.

"There goes the galaxy ghost, headed for a lunar landing," Tom exulted. "It'll soon be giving our message to its companions."

"In the nick of time, too," Bud pointed out. "The invasion of the earth by the Photo-Essence would have started in a matter of hours."

"That reminds me. Bud. I'd better report that the danger is over."

Tom got in touch with the Sky Queen, and instructed the radioman to relay the news to all the world capitals.

"Also," Tom said, "alert the Chilean authorities about the Brungarian spy headquarters at the estancia. It's near Horsehead Point on theStrait of Magellan. Is there any further word about the Transmittaton?"

"Yes," the Sky Queen's radioman responded. "The hacienda lab reports the machine is now in working order. And so is the receiving tank at the university."

Tom signed off and turned to Bud. "Everything seems to be under control. We may as well have a meal and some shut-eye before we reach the Sky Queen."

The boys awoke just before Ted docked at the Flying Lab. He maneuvered skillfully into the hangar at the stern of the big aircraft and cut the motors. Ted accompanied Tom and Bud to the pilot's compartment.

"Bad news, Tom," the Sky Queen's pilot said as they entered. "Your father has been captured by the Brungarians."

"What!"

"The band that kidnapped him sent the message to us. Seems Mr. Swift went out of the jetmarine to reconnoiter in a Fat Man suit, and they seized him while he was inspecting the mastodon on the floor of the ocean."

Tom had invented the Fat Man Suit for use in underwater work. Made of light metal, it was an egg-shaped chamber with pantograph arms and legs that had almost human abilities. By means of buttons, the operator seated inside could control the suit's movements. A gyroscopic automatic brain kept the Fat Man balanced. Oxygen was drawn from the surrounding water.

Tom looked grim. "I'll have to go down myself and see if I can rescue him."

"No use going alone," Bud said. "It'll take at least two to deal with the Brungarians."

"Count me in too," Ted insisted. "I'll handle the seacopter while you fellows are operating on your own. You'll need a mobile base."

Tom and Bud wedged themselves into Fat Man suits aboard the seacopter. When the hangar doors opened, it catapulted into space. Ted guided his craft in a long glide, then turned its nose straight down at the ocean below.

The seacopter flashed through the air and cut into the water. The craft plummeted at high speed until Ted cut the power and brought it to rest on the ocean bottom.

"You should find the mastodon straight ahead," the pilot said.

Tom instructed him to thread his way to a position behind a huge mass of sunken rock. Then Tom and Bud made their exit and waddled off in the murky water toward the spot where Mr. Swift presumably had been left. Tom carried his sonar pen in case the device in his suit might not be strong enough to communicate with the seacopter.

"Tom, there's the mastodon," Bud said.

"And still in its column of ice," Tom answered. "A few chunks have been chipped from the rim. But the beast is well protected. We can move it without any fear of the ice breaking up."

"There's no sign of your father or the Sea Dart," Bud remarked, surveying the area.

"Let's try this direction. Bud."

The boys made their way to the edge of a dark abyss.

"I'd hate to go down there." Bud shivered. "No telling how deep it is."

"Could be a mile or more," Tom said. "The Pacific has a number of places exceeding depths of thirty-five thousand feet."

"Let's go back, Tom."

"Okay, Bud. I don't feel too happy here either."

As they started to turn, a current whipped along the ocean floor. An instant later it met another current, resulting in a riptide.

The boys' pantograph feet were jerked from under them. The riptide picked up the two Fat Men and churned them along helplessly. It sucked them over the edge of the oceanic ledge into the dark abyss!

Tom and Bud were bounced around in their suits until the turbulence made them dizzy. Suddenly they jolted to a halt in a glare of light. They heard a hatch slam shut. Breathing hard and shielding their eyes with the pantograph arms, the boys saw the bare metal walls of a room illuminated by fluorescent lighting.

"Dad!" cried Tom.

His dejected father sat on a bench. "You shouldn't have come after me," he said. "This is a Brungarian sub. Now we're all prisoners."

A door opened and two men, an officer and a sailor, appeared. The officer was a swarthy individual with a mashed nose, probably the result of a dockside brawl. Confronting his prisoners, he ordered them out of their suits.

"I am Captain Roccula of the Brungarian Navy," he said. "You need not introduce yourselves. I am familiar with the Swifts and their friend Barclay. You, so to speak, walked into my trap."

"We were dragged in," Tom retorted. "How?"

"We have a wonderful new invention—an artificial vortex. It is powerful enough to allow us to maneuver anything or anyone we aim it at."

Roccula grinned sarcastically. "Tom Swift, the boy genius, should be able to understand the scientific principle of the vortex."

"The scientific principle is easy to understand," Tom admitted. "But I wouldn't have applied it in the same manner. Our aims are different."

Mr. Swift spoke up. "You Brungarians should put your knowledge to better use."

"How did you spot us?" Tom asked.

"Our sonar and the remote-vision underwater periscope picked you up. All I had to do was maneuver my sub to a point just below the edge of the underwater precipice. I kept track of you on the screen. When I had you lined up in my sights, I activated the artificial vortex."

"Caught like a couple of kooks!" Bud groaned.

"Captain Roccula," Mr. Swift addressed the Brungarian commander, "what do you intend to do with us?"

Roccula scowled. "You foiled our plot to use the Photo-Essence radiation as a weapon. We owe you something very unpleasant."

He moved over to the wall and placed his hand on a switch. "There's an airlock under this holding chamber," Roccula went on. "We use it to dump useless objects into the water. For instance—"

With a twist of his wrist, he flicked the switch. A center panel nearly the length of the floor tilted sharply downward.

The three prisoners began sliding on the smooth metal toward the pit below!

CHAPTER XX

SUBMARINE SHOWDOWN

TOM, Bud, and Mr. Swift braced themselves for a plunge into the black frigid water. Then, just as they were about to slip over the edge of the floor panel, it tilted upward and the yawning gap closed. The three lay in a heap, breathing hard and trying to calm their nerves.

Tom gulped. "Boy," he said, "we nearly had a deep-sea bath!"

Bud managed a grin. "But what would we have done for hot water? Complain to the management?"

Mr. Swift looked grave. "Captain, don't you think you owe us an explanation?"

"I reversed the switch," Roccula replied, "because this was only a demonstration. But we do mean business. You'll follow my orders from now on, or I'll dump you in the sea." "What kind of orders?" Tom asked.

"Orders regarding the mastodon. I'm responsible for getting the beast out of the ocean. It's a delicate job, and you three have the know-how, so you're going to help me."

"Very flattering," Tom murmured.

"Not at all. Everybody has heard of the Swift reputation. I intend to cash in on it."

"Why should we place our scientific knowledge at your disposal?" Mr. Swift inquired.

Roccula flushed angrily. "First, because you'll have a one-way trip if you refuse. And second," he added craftily, "because I just might release one of you after we've finished the job."

The three prisoners were not fooled by that implied promise, but they had no choice.

"After all," Tom said, "the mastodon must be preserved. Brungaria may not be friendly to theU.S., but I'd rather have this relic of the Ice Age on display in enemy territory than in pieces at the bottom of the ocean."

Mr. Swift nodded in agreement. "We can't let the science of paleontology down."

Roccula smiled and rubbed his hands triumphantly. "I thought you'd see it my way," he crowed. "Now, come into my quarters."

After motioning the three prisoners into seats around his desk, the commander gave a rapid outline of the Brungarian plan.

"You can feel that this sub has started to move," he began. "We have the mastodon in tow."

"In tow?" Bud asked puzzled.

"We're using the artificial vortex," Roccula explained. "The suction power is low enough to keep the mastodon from being swept into the holding chamber. We could tow it to Brungaria, but our scientists are afraid the block of ice might disintegrate in transit. So we're heading for a secluded bay on the coast of Chile."

He pointed to a spot on the map south of Santiagonear the city of Lula. Tom made a mental note of the location. On a nearby chart he saw the rocky channel at the entrance to the bay.

"A Brungarian freighter is anchored there," Roccula went on. "It has a refrigerated hold big enough for the mastodon. We'll use hoisting gear to get the prehistoric elephant aboard. Come along."

He led them through a corridor to an observation bay at the stern of the sub. Through a large porthole they could see the giant creature floating in the suction stream.

"Now I've seen everything," Bud said.

Tom did not reply. He had glimpsed a familiar outline in the water to one side. The seacopter! The next moment it had vanished into the murky depths. The Brungarians were so preoccupied with themastodon,

they didn't know they were being shadowed.

"Ted saw them capture us," Tom thought. "I'd better keep Roccula and his men from spotting him." Aloud, Tom said, "Captain, will you show us the artificial vortex? I'm curious about it."

Roccula looked pleased at the interest in his newest equipment. He took his three prisoners to the control room and explained how the invention worked.

"One twist of the dial to the right turns on the full power," he said. "By the way," the Brungarian went on, "did you know we've constructed a receiving tank like yours?"

"I might have guessed it," Mr. Swift retorted, "after your spies stole the plans from the university."

Roccula smirked. "Ours is on display in the lobby of theBrungarianCapitolBuilding. It can collect anything a Transmittaton sends our way. Of course it's not made of Tomasite, and the transmitter still has our scientists baffled. But they will achieve a breakthrough. We'll have a Transmittaton better than yours!"

"Maybe," Bud said with a grin, "but I wouldn't count on it."

The commander scowled. Without another word he turned away and began to work intently on some charts. Several hours went by as Tom concentrated on their predicament and formed a plan.

Suddenly the sub's motors were cut off. "We've moved through the rocky channel," the captain said.

The craft came to a halt in the deep, wide basin of the bay. Grappling lines descended through the water from the freighter above.

While Roccula was busy giving orders, Tom whispered to Bud and his father, quickly outlining a ruse he had in mind.

Tom had just finished when Roccula came toward them. "Get into your suits again," he ordered. "Join my men outside. They're ready to attach the cables to the mastodon."

Mr. Swift glanced knowingly at his son, then slumped to the floor with a loud groan of pain.

"What's wrong?" Roccula snarled.

"Dad's having another attack of appendicitis!" Tom gasped. "We must do something!"

"Forget him," Roccula snapped. "You two-outside! And don't try any stunts. You're outnumbered!"

Tom and Bud donned their Fat Man suits. They went outside, where the enormous chunk of ice containing the mastodon lay on the floor of the Pacific. It had dropped gently into the silt when the vortex power had been turned off.

Brungarians in diving suits were already at work. Some guided cables through the water; others were busy handling the big clamps and hooks that would lift the block to the surface.

The captain came outside to give directions. "How does it look toyou. Swift?" he asked over his sonar phone.

"Okay, Captain, except that we need more hands on the job. Guiding the mastodon up through the water will be the hardest part. We should have every last man from your crew out here helping to balance the block of ice."

The Brungarian commander eyed Tom suspiciously. "I'm counting on this team to carry out the assignment."

"You could be making a big mistake," Tom insisted. "This mastodon is soheavy, these men couldn't possibly keep it from crashing to the bottom in pieces if the hooks slip."

A scowl revealed that Roccula was weighing Tom's advice. His confidence seemed to be slipping.

"I wonder how you'll explain it back in Brungaria," the young inventor went on, "if you should lose the mastodon. And after your government provided their latest sub with all that shiny new equipment—including the artificial vortex."

The captain shuddered. The idea of explaining the loss to his superiors obviously did not appeal to him. The Brungarians were known to have unpleasant methods of dealing with those who failed to carry out orders.

"You may or may not be correct," Roccula told Tom, "but I can't afford to take any chances. I'll give you all the men you need. And you'd better make a success of this operation!"

He commanded the rest of the crew to come outside except for one man who was left on duty to guard the sub. The others emerged in divers' suits, and their commander assigned them to positions around the block of ice.

In the midst of all this confusion Tom stepped aside, switched off the light in his Fat Man suit, and turned on his sonar pen. Ted Brice's voice came in a moment later, reporting he had the seacopter lying underwater just outside the bay.

"Where's the Sky Queen?" Tom asked.

"She's still circling over the place where themastodon tell into the water."

"Okay, Ted. Tell the radioman to contact both the lab at the Castilla hacienda and the university on the West Coast. We're about to deliver the goods. Cliff Culbertson is to train the Transmittaton on the mastodon in this bay, and trigger the machine. Timing—exactly a half hour from now."

"Roger," the pilot answered. "I'll surface behind the headland we passed coming in. That way I'll be able to send the radio message without interference."

After snapping off the sonar pen, Tom lighted his Fat Man suit again and rejoined the group. No one had noticed his absence. Through the intercom he gave Bud a quick report on his talk with Ted Brice.

"Let's go!" Bud called out to the Brungarians, "We want to get this brute to the surface."

Clamps were tightened around the top of the ice, and hooks fastened to the clamps. The cables became taut as the freighter began to roll them in. Ponderously the mastodon was lifted from the silt.

Tom gave orders to the men guiding the massive creature in its icy prison. Carefully he controlled the speed at which the animal was hauled up. Captain Roccula kept a sharp eye on Tom.

Slowly the mastodon rose toward the surface. Members of the crew trailed behind, each gripping the lower rim of the ice. Finally the chunk broke the surface. The taut cables strained to bring their burden clear of the water, and started to haul it up the side of the ship.

One by one members of the crew appeared on the surface and bobbed up and down like corks. Bud, Tom, and Roccula were among them. They watched the hoisting operation intently.

Tom looked at his chronometer. The job had taken exactly half an hour. But, he wondered, had Ted Brice relayed his message? Was the Transmittaton ready for action?

As he asked himself these questions, Tom saw the answer. One moment the dripping column of ice swung from the cables alongside the Brungarian vessel; then, without warning, the whole thing vanished—ice, mastodon, grapples!

"Dive, Bud!" Tom shouted into the intercom. "Make for the sub!"

Their Fat Man suits took the boys to the bottom in a rapid descent. The Brungarians came after them, wild with baffled rage.

Hitting the bottom with his pantograph feet, Tom pulled Bud against the sub and rapped hard on the hull. Beyond them, the artificial vortex snapped on in a swirl of water.

"Dad got my message!" Tom said.

The Brungarians, swimming furiously after their prey, zoomed without thinking into the path of the powerful suction current. The man in the lead was whirled headlong into the holding chamber of the sub. The next man followed him, then the next, until every one had been snapped up by the vortex.

Roccula came last. As the suction hurled the captain into the chamber on top of his men, the hatch closed automatically. At that moment Mr. Swift joined the boys in a Fat Man suit.

"The Chilean Navy will be interested in these Brungarians," he stated, and told of having knocked out the crewman who had been left on board to guard him.

"Your scheme has worked so far, Tom," Bud commented. "What gives now?"

"I told Ted Brice to meet us with the seacopter. And here he comes right ontime."

"Welcome aboard!" Ted greeted the three as they got in with him. "I'm glad you came through that okay."

"We're thankful you knew we were in a spot," Tom answered. "I've never seen a more beautiful sight than the seacopter trailing that Brungarian sub."

Ted surfaced and flew back to the Sky Queen. The entire crew cheered as the Swifts, Bud, and Ted emerged from the seacopter into the hangar. The excited greetings were interrupted by the radioman who handed Tom a message from the West Coastuniversity. Tom read it aloud:

"Have received one mastodon on ice in perfect condition! Congratulations!" A second cheer rang out.

Bud chortled. "I'd like to see the Tall One's face when he hears that."

It did not seem long to the boys before the Sky Queen landed once again in the valley near the Castilla hacienda. Chow and the lab technicians were waiting. Most of the equipment had been packed. Only the Transmittaton remained at the lab.

"Bud and I will pick it up," Tom said. "We're going to the hacienda to say good-by to Senor Castilla."

The orange grower thanked the boys for their splendid help. "Everything is back to normal," he said. "The villagers are happy to be working again without fear of the Snowman or the blue fire. And the Chilean police have rounded up those Brungarian spies at the estancia on the strait."

He led Tom and Bud to the underground lab. In it was the Brungarian Melt Master! "I had this brought down from the mountain," Castilla explained. "Now it is like a white elephant on my hands. I have no idea what to do with the machine. I wish the Brungarians had never brought this invention toChile."

"I think I can take that problem off your hands, Senor Castilla," Tom said with a twinkle in his eye.

He picked up a brush. Then, in large black letters, he painted on a piece of cardboard: OUT OF ORDER. Tom hung the sign on the front of the Melt Master.

The next moment he activated the Transmittaton. In a flash the Brungarian machine disappeared.

"Where did it go?" Castilla blinked his eyes in astonishment.

The young inventor replied with a broad grin, "The famous Melt Master has just been transmitted to the receiving tank on display in the Capitol Building of Brungaria!"

THE END

TOM SWIFT AND THE GALAXY GHOSTS

BY VICTOR APPLETON II

No. 33 in the Tom Swift Jr. series.