



©copyright 2011 by the author of this book (T. Edward Fox - pseud.). The book author retains sole copyright to his or her contributions to this book.

This book is a work of fan fiction. It is not claimed to be part of any previously published adventures of the main characters. It has been self-published and is not intended to supplant any authored works attributed to the pseudonymous author or to claim the rights of any legitimate publishing entity.

Tom Swift's— SeaSpear

By T. Edward Fox

When the Royal Navy approaches Swift Enterprises with a request for a new type of undersea protection drone, Tom rises to the challenge even though it means keeping the project secret from his own Government.

Based on his successful jet drones—protecting Enterprises, Fearing Island and Loonau Space Port—he comes up with an autonomous, torpedo-shaped machine capable of emitting a high-energy field that disables underwater tracking devices as well as incapacitating SONAR and communications from submarines rendering them blind and deaf, and unable to maneuver.

Then, without warning, word comes from the Admiralty that the project will be scraped. Can the project be saved somehow, or is this invention doomed to be forgotten?

With a sigh and a grin, Tom sets his jaw and makes the best of an almost impossible situation.

This story is dedicated to all the men who have ever climbed into a miniature underwater device and used it—for good or evil—in the most inhospitable area of our entire planet. Claustrophobia, asphyxiation and death awaited many while the wonders of the ocean deeps greeted many others. It takes a better man than I to go mini-subbing (with the exception of the submarines at Disneyland!).

A SWIFT ENTERPRISES INVENTION BONUS

SeaSpear

CONTENTS

FOREWORD

To the best of my knowledge, there are three true loves in Tom's life: Bashalli Prandit and his family, outer space and the depths of the oceans. Where he is willing to fight to the death to protect the first ones, he has often been reckless and impulsive when dealing with the other two.

Most of his undersea efforts have dealt with either exploration or recovery. Also, most of this work has been done to benefit either the U.S. Government or Swift Enterprises—or both.

This is changing as Tom agrees to take on a project for a foreign power. Granted, he is doing this for our British friends, but this is one of the few secret “design it, make it, give it to us and forget it!” projects in which he has involved himself. One he can't even tell his own Government about.

It is with great interest that I have watched Tom go from child to teen to young man to adult. This project came his way just a few weeks shy of his first anniversary of the day he met Bashalli, and shortly after his nineteenth birthday.

In a series of firsts, Tom must figure a way to involve Bashalli so that she doesn't feel left out of his life. What a way to take those final steps into adulthood.

PART

PAGE

1	His Majesty Requests Your Help	3
2	Project: Cancelled!	7
3	Like Leviathan, Rising	11

Victor Appleton II

PART 1**His Majesty Requests Your Help...**

TOM SWIFT sat in the office he shared with his father at their company business, Swift Enterprises. Already an accomplished inventor by the time he turned eighteen, Tom—recently turned nineteen—had gained a reputation for coming up with imaginative and superb solutions to problems faced by him and others.

Glancing across the room at his father who was busy completing an engineering study for a new nuclear power plant to be built in Canada, Tom wondered what might come next. It had been almost a week since he returned from his last adventure. Time was—he realized—something that moved around him only when he had something to do.

Otherwise, minutes felt like hours, hours felt like days, and he didn't even want to consider how long days were.

His intercom buzzed and their secretary announced an incoming call. "It is from a gentleman representing the Foreign Ministry of the British Government, Tom. Line two."

He picked up the receiver and pressed the button. "Tom Swift here."

"Oh. Yes. Well... this is Vice Admiral Thomas Rhys-Davies of His Majesty's Foreign Office," the man announced. Tom noticed that he pronounced the final part of his name as 'Davis,' a certain sign of Welsh

heritage.

"Yes, sir. How might Swift Enterprises assist you?"

"Yes... well... hmmm. I had it here a moment ago. Where did that letter go?" Tom could hear his caller mumbling and evidently digging through some papers. "Ah. I have it now. Anyway, I need to read something to you and then I will ask for your opinion, questions or an answer." He cleared his throat.

"His Majesty, the Rightful King of England, Britain and all Commonwealth Nations, properties and holdings, request your help on a project of great national and international import. The nature of this project is of highest national security and can not be divulged in any manner other than face-to-face." The caller said as an aside, "I hope you are following me so far."

He continued in the official voice he adopted while reading the letter. "This project is, in broad terms, one for the Admiralty and will necessitate a series of meetings along with the top secret handling of all communications, devised materials, and finished project attributes. His Majesty asks for your full consideration for this project and wishes the favor of your reply within forty-eight hours." His voice went back to normal conversational tones. "I realize that is more than a little cryptic, but I sincerely hope that you might be intrigued enough to come to our offices in London to discuss this with the appropriate individuals."

Tom sat there slightly bemused. He often received somewhat obtuse requests, but they were generally from the U.S. Government and could be handled with a short

trip to Washington, or—as happened quite often—a visit was made to Enterprises by the officials involved.

“Well, sir. I would like to know a bit more, and I do happen to have some time in my schedule. If you would be so kind as to forward the request through the proper channels, we will receive it by this time tomorrow. I could, assuming it works for your and your people, be in your offices the day after tomorrow.”

“That would be splendid. And, the letter was actually sent through several hours ago. We’ve received acknowledgement of delivery. I was informed to not contact you until a decision within your State Department was made as to whether they would allow you to work on a project that your own government will not be briefed on.”

“I see,” Tom said, wondering what might be so top secret that the two most friendly and cooperative governments on the Earth could not tell one another about.

He ended the call by promising to discuss the matter with both his father and the Enterprises Legal department. “I will contact you tomorrow at this same time,” he promised.

“What was that all about, Son?” his father asked, looking up from his desk. “It sounded pretty formal.”

Tom told the older inventor about the nature of the call and the possibility of a ‘for-British-eyes-only’ project.

“That could be a huge undertaking, Son. My suggestion

is to go to the meeting, see what it is they want, and then we can discuss how Enterprises can be involved. The one thing I would like,” he added, “would be for this to bring some money into Enterprises. If all they want is your advice or a design that they will build, I might caution you and suggest declining. That is, unless they are offering a blank check.”

Tom could see his father’s eyes twinkling and knew that he was only partly serious. Tom also knew that a large business like Enterprises was exactly that: a business.

Half an hour later a Department of State woman called to speak with Tom.

“My name is Mary Jane Marryhill, Mr. Swift. I am low enough on the totem pole here at State that my title wouldn’t mean a thing to you so I won’t bother boring you with its recitation. Suffice it to say that requests like the one you have received from the British government typically fall onto my desk. The thing is, and to be absolutely frank with you, this is a request of a much higher order than those with which I typically deal.”

“I think I understand that, ma’am,” Tom told her, “but I believe the question now is, what do I do? Is the State Department giving me the okay to meet with the British government? And, if we believe this is a project Swift Enterprises could successfully be involved in, do we take it and keep everything secret from our own Government?”

“All very good questions. I wish I could tell you I had all the answers. For now, I believe that you should use your own discretion whether or not to go to the meeting. This is a legitimate request. I am certain you will be placed

under non-disclosure, and the U.S. Government has no issues with that unless you receive any information that might indicate any aspects that could be negative to the United States or any of our allies or protectorates. In that case, we would ask that you refuse the project, divulge such information to us and allow both diplomacy and the Government to handle any consequences.”

“Do you think—” he began.

“We believe that scenario to be a million to one chance, Mr. Swift. But, I wanted you to know the official position of your Government. The only other thing we request is that you notify our Consulate in London immediately upon your arrival and departure.”

Tom agreed to these terms. Five minutes later, via a highly secure connection, the letter file came through and was printed out.

Tom and his father read it over.

“I have just two words to say,” his father told him after reading the sketchy details. “Go pack.”

Tom flew the *Sky Queen*, his first major invention and one of the largest jets built, to England the following morning, arriving at RAF Station Brize Norton—an hour’s train ride from London—just before traditional English tea time.

While the three men of his crew remained onboard, he was escorted to the office of the commanding officer and offered tea and chocolate covered cookies.

“Now, Tom Swift, Tom Swift, Tom Swift,” the

commanding officer repeated, beaming toward Tom. “What a genuine pleasure it is to host such a luminary. We were, of course, informed of your impending arrival but were ordered to keep snoop noses to a minimum. I suppose,” he said looking slightly sad, “that includes even telling me what, as I believe you say in America, is up?”

Tom apologized but agreed that his orders did mean he could tell the man little except that he would be taking a train into London early the following morning and most probably departing later that afternoon.

The officer insisted on supplying Tom with his personal car and driver. “Butterwell will pick you up at your marvelous jet at, say, half-six, and you will be safely deposited at the Admiralty offices between eight and eight fifteen.”

“Uh, half six?” Tom asked.

“Ah. Sorry. That would be your six-thirty. Half *past* six, do you see?”

The next morning Tom was just approaching the lower deck hatch when a knock came on the fuselage. He looked through the small porthole and directly into the shiny, alabaster face of a pretty young woman in dress uniform.

“Airwoman Alison Butterwell, at your service, Mr. Swift,” she reported when he opened the hatch and climbed out.

Although protocol called for him to ride in the back of the large, American sedan, Tom insisted on sitting up front with his driver. She was, he noticed, about his age

and stunningly beautiful. *No wonder that old goat commander has her for his driver. She is a real looker!* he thought to himself as he stole yet another glance at her face.

Right at the stroke of eight the car pulled into a small driveway at the rear of a very large and very old stone building. Tom's driver showed her credentials and mentioned Tom's name to the young Royal Marine armed with, what looked to Tom, to be a very menacing automatic rifle.

A clipboard was checked and they were waived through and the heavy gate closed behind them.

Alison insisted on coming around and opening the door for Tom. He thanked her and asked where he would find her later.

"I will be right here, sir. I've brought my knitting and will be trying to complete a woolly-pully I've been working at for the best portion of this month." When she saw Tom's questioning face, she reached into the car and pulled out a large handbag. Inside was a long-sleeve, dark gray sweater. "Made of wool, sir. You pull it over your head? Woolly-pully!"

Tom smiled and left to follow a man who had appeared a moment after he had stepped out of the car.

He was escorted to a third floor office with no sign or markings outside the heavy wood door to indicate its occupant or its use.

Following a round of introductions with the eight

people in attendance, and the signing of agreements, Tom finally heard the reason for his visit.

"The admiralty is building a series of undersea nuclear reactors. Not only will these be immune from meltdown caused by power outages that might cripple water-based cooling systems on land-based reactors, they will be buried under hundreds of feet of rock and safe from seismic shockwaves. We plan on a ring of eighteen of them around the British Isles within the next fifteen years."

"Swift Enterprises certainly has the expertise to offer in building your reactors and control systems." Tom commented.

"Yes. Well. That really actually the reason we have asked you to be here," a man who had identified himself as Vice Admiral Hedely Smyth-Jones told Tom. "What we require are security services."

Tom was dumbfounded. He stared at the assembled men and women around the table. Finally, he was able to say, "Sir, with all due respect, Swift Enterprises is not in the business of providing policing services."

"As usual, Admiral Smyth-Jones spoke in an incomplete manner," another Admiral, Tom could not remember the name of, stated. "What we require are a series of underwater security craft. Fully autonomous and capable of detecting, intercepting and neutralizing any incoming enemy craft or even a diver."

The discussion now turned to things Tom could both understand and respond to. What the British people

wanted were basically what Tom had earlier invented to patrol and control the skies over Fearing Island—the Swift’s experimental rocket and submarine base off the coast of Georgia—their nuclear facility the Citadel in New Mexico and even Swift Enterprises and the old Swift construction Company.

These drones were small yet powerful jet aircraft that could remain aloft for up to a full day slowly flying random patterns over a facility. Immediately upon detecting a possible intruder, or being given a directive from the control tower, they could speed up to near sonic speeds, swarming around the intruder and sending out a variety of strong signals disabling the intruder’s computers and other flight controls. Most aircraft could be forced into a safe but bumpy landing.

Older and smaller aircraft could be buzzed and harassed by the drones and corralled, or even flipped over if absolutely necessary.

“That is precisely why we believe you to be the vendor of choice,” a female officer, Admiral Vivian Glenn, told him. “The ones we need just have to work underwater and be able to detect both submersible and surface craft along with single and multiple divers. Then, they must maneuver at top speed and disable whatever the source of potential attack.”

“They must be able to outmaneuver other submarines and torpedoes,” added a man who was not in uniform, but had been introduced as Lord Hastings. “Needless to say, they must be absolutely lethal when necessity arises!”

Tom was surprised as the look of... well... hunger in the

man’s eyes as he uttered the word ‘lethal.’

“Well, then,” he said, rising from his chair. “It has been interesting and Swift Enterprises appreciates the invitation to speak with you, but I will now, on behalf of my father, decline your project.”

There was a clamor of voices calling out such things as, “Impossible,” and “Ridiculous,” and “I never!”

“The fact is that Swift Enterprises does not design or build *lethal* devices. You had my interest until His Lordship made it clear that the intent is not to merely incapacitate an enemy, it is to destroy them. That would make this device a search and destroy weapon, and as I stated, we aren’t interested. Good day.”

He scooped up the several sheets of paper that had been provided to him, tore off the single page of notes he had made on his own pad, and handed them all to Admiral Smyth-Jones. As he headed for the door, the Admiral called out to him.

“Please wait, Tom! His Lordship, while he has the right to speak his mind, is in no way in command of this project. His... opinion, is just that and not that of the Admiralty. Please come back. We really do need your assistance in this.”

Tom turned in time to see Lord Hastings turn a bright shade of red. “Damn you! I’m a *lord*! I have never been countermanded in my life!” he exclaimed, pounding a fist on the table. “If you believe this project can continue without financial support from me and The House of Lords, guess again. His Majesty shall hear of this!”

With that, he stalked from the room.

Tom looked around the room at the remaining military people. While they all seemed slightly shocked, they also were looking at him as if truly asking for his support.

“As this is a project at the specific request of His Majesty, I doubt he’ll get very far,” stated Admiral Glenn. “Will you assist us?”

“Fine. As long as it is fully understood that we will neither design anything to be a weapon, nor will we make accommodations for the addition of weaponry in the future, I am still interested.”

They talked for another hour. All the while Tom made a few notes, sketched numerous diagrams and even pulled out his calculator to perform several engineering computations.

By the time he left the building he had a firm plan in mind. Except for the substantial difference in detection and control of undersea craft—and especially divers—versus that of his airborne drones, the concept was so similar to his drones that he was imagining simply removing the wings from a drone as the first design step.

Of course, he told himself as Airwoman Butterwell wheeled the car out of the gate and headed back to the air base, *that leaves a whole mess of underwater control issues to tackle.*

PART 2

Project: Cancelled!

TOM SPENT the weekend dissecting his drone design and systems and devising alternate systems that would work for this underwater craft.

By Monday afternoon, the U.S. State Department had delivered a copy of the contracts, asking for a brief conference with Tom and his father.

“While we recognize that you have the absolute right to go under contract with a foreign government, all we ask is your assurance that this project will in no way negatively impact the United States or our foreign and domestic interests.”

“Let me assure you that while this project must be kept secret in the national interests of the British government, I have studied my son’s notes and the materials provided, and can assure you that I see no conflict with our duty to this country. In time, I believe that their government will inform you of most aspects through diplomatic channels. And, at that time, if they should so authorize it, we will completely divulge what we have done for them.”

This seemed to satisfy the federal man, and he departed minutes later.

“You’re not going to make a liar out of me, are you, Son?”

Tom simply smiled.

When Tom and Bud met up just after lunch the next day for a short test flight of a new variation of the *Racing Pigeon* airplane—Bud wanted Tom’s expert eyes, ears and brain on board during the test—their conversation turned to the broadest aspects of the British project.

“So, you want to bounce something off my poor little brain that you really can’t tell me much about? Is that it?”

Tom nodded. “Sorry, flyboy, but for the first stage of this, the design, I can only tell non-essential people the most vague details. What I need to know from you has to do with our recent diving experiences. We’ve been bombarded with ultra- and sub-sonic noises, shocked by that illegal trawler, and even subjected to contaminations in the water.”

“Ah, stop it, Tom. You’re making me nostalgic for all those good times.”

“Anyway... if you had to pick one of them, what was the most effective at stopping you in your tracks? What could you never see yourself getting through once it hit?”

As the small plane climbed away from the runway and soared to the north, Bud thought the question over.

“All in all, I think it was the electrical shock field. It kinda snuck up on us and we were right in its grip before any of us knew what was happening. It took your superhuman brain and will power to get us out of that. If the shock had hit us suddenly, like if we had gotten closer and then *WHAM!* my bet is that we’d still be there. Only, not as healthy.”

Tom had come to basically the same conclusion the day before. That meant that one of the required disabling technologies was now taken care of. That left several others, none easier than any other one.

As they were landing an hour later Tom remarked to Bud, “I think your instincts about that tiny elevator jitter are right. There has to be something in the cable or pulley systems that is allowing vibration. Why don’t you ask Hank Sterling to go over to the Construction Company with you to see one of the planes under construction. If they don’t have one with open wings, call me and I’ll have Dad ask Jake Aturian to break one back down. It might just require some sort of tensioner to fix.”

Back in his lab, Tom opened several files and found two that he felt could be combined into the ‘diver stun’ emitter. He ran some figures to see what power might be required and discovered that it would need to be varied depending on depth and salinity of the surrounding water. The idea would be to stun but not injure, and what would work at fifty feet would need to be decreased at two hundred feet as the pressure difference made transmission of the electrical shock travel faster, farther and with less dissipation.

That led to another series of computations, followed by a late night session designing and prototyping the control and power circuitry. By the time Tom left for home near midnight, he had built the first test version of a system that would constantly measure the water, decide on the voltage and amperage of the appropriate shock to emit—also based on the distance to the target—and then draw the necessary power from a bank of Swift Solar Batteries

that would be inside the sea drone.

The following week was a whirlwind of design and redesign. Every time Tom thought he had one system working correctly, another one would prove to cause interference, or require too much power or need space in exactly the same location another system also should occupy.

He was sitting at his design station one day when a visitor popped his head through the door and said, "Hello, skipper."

Tom looked up for a quick grin and then went back to concentrating on his work.

"I like the sleek lines," Bud commented as he took his favorite perch on a stool at the end of Tom's workbench. He was looking at an internal layout of all of the various systems, shown without an outer case. "What are you going to call it? The naked torpedo?"

"Well," Tom told him, "the folks in England have been referring to it as Project: Ocean Lance. Actually, one person suggested calling it Ocean Pike, which is that long weapon their Palace guards sometimes carry. Dad pointed out to them that a pike is a fish and they dropped that pretty fast."

"So, can you finally tell me exactly what this thing is suppose to do?"

"It's your lucky day, Bud. The Admiralty just gave us the go-ahead to let everyone involved know what it is they are working on. Most of the employees here have been

assigned to small pieces with nobody knowing what it all will become. So, since you are one of my *top* advisors..."

Tom told his friend about the underwater drone. About its dual purpose of searching for and then disabling intruders. He did not tell Bud about the nuclear power plants: that was far beyond what anyone other than Tom and his father were allowed to know.

"So, if I have this correctly, you are kinda reinventing your little jet drones. Is that it?"

"In simplistic terms, yes."

"Well, I don't like the whole 'lance' thing. Sounds too much like some guy's name. How about Sea Spear? Make it all one word, perhaps."

"I like it. And, it has the benefit of not sounding like the name came from Bud's factory of pun names."

"Remember you asked me a few weeks ago about the diving and shock thing as part of this?" Tom nodded. "Okay. I understand it. I've been there. Only question is, what can you do about a submarine? A simple shock isn't going to make much of an impact. I mean, compared to this little thing they are kind of huge and they continue to move by themselves unless you put on the reverse thrust, what can you do to stop one?"

"Several things. First let me tell you about the basic sequence of events. For starters, these will be zooming around at various depths in packs of probably five or six."

"Guarding what?"

“Well, for one thing they could be running under a fleet of ships providing detection and security from an underwater attack,” Tom told him reciting a cover story he had come up with a week earlier in case anyone asked the same question Bud just had.

“Oh. That makes sense. Go on.”

“Okay. Our *SeaSpears* are moving around both listening when they are in a quiet mode and actively pinging when in live mode. We’ll be using the same sort of fish sounds to disguise what amounts to a radically new type of SONAR. It will operate at frequencies most subs can’t even detect. They won’t know the drones are there until it is too late.”

“What about the whole diver thing?”

“The two methods I just mentioned should detect anyone in traditional gear or even a rebreather rig. In order to detect someone in something like our hydrolung suits, I needed to add one other component. Each *SeaSpear* will emit an extremely low electro-magnetic charge into the water. Anything large enough, probably larger than a small fish, will interfere with the flow of the magnetic waves. The next closest *SeaSpear* will detect incoming information from the others, sense the disturbance in the waves, and use it to determine what might be out there. Anything purely organic can be, well, deterred with a small shock. Anything that has any metal will be treated as a probable intruder and get the full shock treatment.”

“And then?”

“The *SeaSpears* let their human observer/controller know exactly what they find and can be directed to the site of the intruder where their underwater cameras will show what exactly got shocked. I suppose that I could set things up so that the controller gets to see the intruder first—” He left the rest of his thought unsaid.

“And, if it is a submarine or worse... a torpedo?”

“In case of a sub, the *SeaSpears* converge at top speed. They begin emitting a broad spectrum of electro-magnetic and audible signals capable of effectively blinding and deafening all of the sub’s detection and communications capabilities. Then, if the controller determines it necessary, several of them can head toward the propulsion areas, whether they are traditional screws or new worm-drives, and fire a series of woven Durastress and carbon fiber nets into the works. That will foul things up in just seconds.”

Bud was smiling. “So the only thing left to do is surface and give up!”

“That’s the plan.”

Bud stopped smiling and asked in all seriousness, “But, what about torpedoes?”

Tom also sobered. “Torpedoes on search patterns will be as effectively blinded and deafened as subs. But, any one on final lock-on will need to be intercepted. The *SeaSpears* will be preprogrammed to be suicide robots and streak into the path of the torpedo.”

When Bud inquired about how far along Tom was, the inventor had to shake his head. “I’m a bit behind, actually.

The specifications call for this whole thing to be launchable from a standard torpedo tube. I guess that the idea is they get carried along inside a sub and then released into the water to stand guard in case the sub needs to patrol away from the fleet.”

“So, what’s the problem? Your jet drones minus wings are fairly small.”

Tom explained that it was a matter of power. In order to power all of the interference systems, and to keep them running for up to thirty minutes—another specification—that meant more than a dozen Solar Batteries would be required. The overall size of that battery pack, even if Tom decided to purpose-build batteries so they could fit snugly into every available nook and cranny, would be so large that no room would remain for the propulsion system and the comprehensive computer systems needed to make these autonomous water craft.

No matter how much Tom was able to miniaturize some of the circuitry, the bare fact remained: size was against them.

He took a couple days off to both ponder the problems and to catch up on several dates he had missed with Bashalli, his girlfriend of almost one year.

That night while the pair walked along the shore of Lake Carlopa, near the site of an upcoming Yacht Club extension project, Tom sought for ways to tell Bashalli about his problems without breaking his secrecy agreement.

“I sense that you have something very important laying heavily on your mind, Tom,” she said, clutching his hand

more firmly. “Is it about an important date? The one that comes late next week? The one that signifies the one-year point from when we first met? Or, is it one of your frequent ‘I can not tell you about it, Bash’ things, or is this one I might assist you with?”

He leaned over and kissed the top of her head. He lingered to take a sniff of her hair. He had almost forgotten the anniversary coming up. He made a mental note to ask Sandy for help selecting an appropriate gift.

“A lot of the latter and very little of the former, Bash. Sorry. Let me think about how I can bring you in on this —”

They walked along in silence for almost ten minutes before it hit him.

“Bash? Can you pass muster on a background check? I mean, is there anything in your family background that might keep you from being okayed for security work by the Government?”

“Only if you count my great uncle Akmal the murderer of one thousand princes.” She said this with a straight face. For a brief moment, Tom became worried. Then, her face split into a big smile and she began laughing. “In truth, my family has already been through such a process. Father’s job required a complete check of his and all our backgrounds by the FBI. Why?”

“I have an idea,” Tom told her. “Tomorrow, I’m going to get you assigned to the team as our designer. You can be responsible for the outer casing for what I’m working on. Then, I can tell you about it.”

Once word came through from the FBI that Bashalli had no negative marks against her, Tom contacted his liaison in the British Admiralty.

“I see no good reason why your new designer cannot be informed, in broad terms of course, of the purpose and aspects of the project, Tom.”

“That is what I hoped you would say, Admiral Glenn,” he told the woman on the other end of the phone line.

When Bashalli learned about the specifications of the project, she had some immediate thoughts.

“To begin with, if such a vehicle must be the size of a torpedo, it will not be, by necessity, as limited as a torpedo? You cannot, for instance, have propellers that are larger than the width of the body. Also, there is the matter of steerability. My understanding from the movies is that torpedoes are very good at straight lines but are not known for handling like sports cars. Have you designed that?”

Tom admitted that he had been more intent on the workings of all the detection and disabling systems.

Bashalli asked for a day to come up with some sketches of possible designs. “I can not guarantee that everything will be within the narrow limits of a torpedo,” she informed him.

When she showed him five possibilities the following afternoon, Tom was immediately enchanted with two of them. The first was about eighteen feet long—a Navy standard—but it was almost three feet wide, twice that of a typical torpedo.

“I tried and tried to account for everything you said must go inside, and to build in a very fast propulsion and steering system that Mr. Hanson told me about.

She described a pair of swing-out drive blades—basically turbines—inside of ducted cowlings. They would, she told him, rotate in opposite directions and could be used to assist in sharp maneuvers.

“How in the world did you come up with something that different so quickly?” he asked her with admiration in his voice.

She blushed slightly as she told him, “Mr. Hanson had been working on that for several weeks. He asked me to sneak it into one of my designs to see what you thought. Are you angry?”

“Heck, no, Bash. In fact, if it weren’t for the thing being too wide to fit, I’d say that’s my favorite. That may leave us with the other design.”

He referred to a torpedo with two pairs of counter-rotating blades, one set about two feet back from the nose and the other set at the tapered rear. Bashalli explained that the forward blades would be stored in a retracted position and only extend out of the case once the device was launched.

“Let’s assume that design number two is the one to go with. Do you have anything in the computer yet?”

She shook her head. “I only have these drawings, Tom. Nobody has shown me how to add them to the computer.”

They spent the next two hours scanning and transferring her manual work and turning it into a wire

diagram in the computer's CAD program. While she worked to refine the design to add all of the various detectors and emitters, Tom continued his work on the internal systems.

It still appeared that power was going to be a major issue.

"It might be that these need to come back to nurse at some underwater feeding station," he told Bashalli. "Maybe as often as twice a day to keep enough charge available to do what they are designed for."

After consulting with his father, Tom placed a call to the British Admiralty. He asked to speak with his most recent contact, Admiral Glenn.

He was about to give up after waiting for more than fifteen minutes when the line was answered by a recognizable male voice.

"Mr. Swift? Vice Admiral Smyth-Jones. I hope you remember me."

"Of course. What might I do for you, sir?"

"Actually, is something I must do, well... it isn't exactly *for* you. The fact of the matter is that Lord Hastings and a bunch of his fellow inbred morons—and I beg that you not repeat those words—have banded together and pulled the current funding for the project."

"What does that mean, sir?" Tom was stunned.

"It means, in naval terms, that we are completely dead in the water, I'm afraid."

PART 3

Like Leviathan, Rising

TOM HELD the receiver away from his ear and stared at it in disbelief. Returning it to his ear he asked, "How is this possible? I mean, is your whole underwater project also cancelled?"

"Afraid I can't discuss that, Tom. This may not be over, but I can tell you that the straw, I believe the saying goes, that broke the camel's back came from not just the Lords. The Prime Minister is reported to have been gobsmacked... that would mean totally shocked... over the nature of these being unmanned. Someone convinced him that such devices could run amok and be a danger to construction crews and to the facilities once completed."

"But, all of those things would be taken care of via programming, sir. Doesn't your P.M. realize that?"

"Right now it is of little use to try to convince him. So, with regret I must ask you to put all work into a hold mode. Have your administrators figure out costs as of today plus anything that cannot be cancelled from any subcontractors or suppliers. We will find the funds to remit for all of that. As for the rest—"

When Tom hung up, he felt a wave of anger sweep over him. All that work. All that time. All that effort, just to have it swept away by what seemed to be ignorance and infighting!

Damn it! Tom thought. He got up and stalked out of his office.

He hopped into his convertible and drove out of the gates of Enterprises. Twenty minutes later he realized that he was nearing The Glass Cat, Bashalli's brother's coffee shop. While unintended, he was glad to be there.

Bashalli looked past the customer she was serving and gave Tom a big smile as he entered the shop. He tried to return it but it was obvious from her concerned reaction that she knew something unpleasant was going on. As soon as the man at the counter received his drink and pastry order, she wiped her hands and came out to see Tom.

"I can see that you are unhappy. Is there anything I can do?"

Tom told her about the premature end of the project including the involvement of Lord Hastings and his cronies.

She was as angry as he had been once she heard the news. "That is unfair. To simply drop what must be a very important project because one old man had his feathers ruffled—"

Tom put a finger to her lips to silence her. He shrugged and she puckered her lips as if to kiss his finger. Instead, she gave it a playful bite and sat back. "Is this one of the 'no use beating a dead horse' situations?"

"I'm afraid that it looks like that," he admitted sadly.

Tom dabbled over the next week on several refinements to a pair of older inventions. The first, his SuperScope—a combination high-powered video camera and computer enhancement system—had recently revealed a weakness under certain light conditions. He resolved that by a

combination of an additional enhancement algorithm and a changeable lens filter.

The second was also an enhancement; this one to a small rescue vehicle he had designed for use up at the outpost in orbit 22,300 miles above the equator.

He was almost finished with designing a special sensor to monitor the occupant's condition—the capsule was only for use to evacuate injured personnel who required rapid transport to an Earth-side medical facility—when his intercom buzzed.

"This might seem like *deja vu*, Tom, but there is a gentleman with a British accent on line three."

Tom picked up the receiver and took a deep breath. "Tom here," he stated into the phone.

"Tom? How very nice to speak with you again. Thomas Rhys-Davies. I hope that you are sitting down. I have a spot of news for you. The project is back on. We have the full cooperation of the P.M., the House of Lords, and also MI-6. In fact, it is through their involvement that everything is back on a non-cancelable track."

"That's great!" Tom exclaimed. "The only issue is that before things stopped, we were having a little difficulty. It's something I need to discuss with your team. Would it be possible for me to come back over for a meeting on Thursday?"

"I will make it possible. Plus, I will be sitting in on this one as will the Deputy P.M. and several individuals from MI-6. Don't let any of them intimidate you. Say your piece, stand firm on anything they try to argue, and we should get this all back moving forward in a few days.

Cheers!”

With that, the line went dead.

As before, Tom arrived the afternoon before the day of the meeting at Brize Norton Airbase. The commanding officer was on a visit to another RAF base in Northern Scotland, but his driver was assigned to keep him company that afternoon and evening.

“I would ever so much prefer if you would call me Alison instead of Airwoman or Miss Butterwell,” she told him.

“Then, please call me Tom,” he replied. She gave him a complete tour of the air base that afternoon and had dinner with him in the commanding officer’s private dining room. Bidding him a pleasant evening at eight, she was about to remind him of the time she would pick him up, when he said, “So, half-six?”

Smiling, she nodded. “Oh, and by the way... I’ve completed my wooly-pully. If you like, I can bring it along to show you.”

“I’d like that. Good night!”

As he climbed into the car the next day, she handed him the garment. He noted that she had sewn dark fabric patches on the shoulders and elbows, and that her military insignia had also been sewn onto various locations.

When he asked about this she replied, “It’s actually a uniform part. Only, not for this hot weather.”

His meeting began with a round of applause from the British contingent. There were smiles all around as he

told them of his progress and nods of understanding as he detailed the several areas where problems remained to be overcome.

“I believe we can provide you with a small bit of relief on your space issues,” a man identified as an agent from MI-6, but with no provided name, told Tom. “The entire issue of launching from a torpedo tube was originally circulated as a red herring. It seems that you were never given the entire story. For that, I apologize on behalf of His Majesty.”

Tom was puzzled but decided to just let things move forward, so he said nothing.

“The other thing is,” said the Deputy Prime Minister, “we have come to the conclusion that these need to be able to be manned vehicles. Just one man, lying prone, but we know that presents a world of issues around overall size and breathing systems and toilet facilities and such.”

Tom nodded but felt greatly relieved that the size constraints, especially the width of the vehicle, were no longer an issue.

After a number of hours of further discussion, it came about that the only time the small drones would be manned would be in times where probable attack was indicated, and during the loading and offloading of nuclear materials.

“So, if I fully understand, these still need to operate autonomously but on certain occasions, they must be able to incorporate a living pilot. How long would he or she be in a drone?”

“Probably for a four-hour watch shift.”

After she delivered him to the Sky Queen, Airwoman Butterwell said, “I very much look forward to your next visit, Tom,” and gave him a quick kiss on the cheek. They parted ways, both furiously blushing.

He returned home that evening in time for his anniversary date with Bashalli.

“Great news, Bash,” he told her as they were walking down the steps from her front porch. “You remember that other design I liked? Your larger one with the big swing-out turbine blades?”

“Of course I do. And, I must tell you that you seem to be in a better mood now that you were when you left yesterday. Is the project really back on?”

His smile told her all she needed to know.

They worked the weekend together in Tom’s underground office. Bashalli pulled out her second design and got everything entered into the computer, with Tom’s help. She then began the process of enhancing the design and accounting for all components as well as the compartment where the pilot would lay.

“Is it possible to use that space as additional battery storage when a pilot is not desired?” she asked.

“We’re thinking along the same lines, Bash. I say, absolutely! Make the pilot’s area a slide-in capsule that mates with the necessary couplings at the rear. Push it in and you have a manned version with a six to eight hour operating span. Pull that out and shove in a battery pod and you’ve got the autonomous version with a forty-eight hour operating range.”

Several days later Arv Hanson was asked to come to the lab. There, Tom and Bashalli showed him the sleek design for the *SeaSpear* drones.

Knowing all of the pain and heartache that had gone into them, he remarked, “If this were a jet project, I’d say it was like the Phoenix rising from its own ashes. What would be a good comparison for under the sea?”

Bashalli said, “Well. One of the guardians of the underwater world was the Leviathan. I know that everyone associates that name with some giant sea creature, but originally it just meant guardian with no particular size. This is like a Leviathan, rising from... well, if not ashes then at least from the muck and mire.”

They all laughed at the truth of the statement.

A week went by before Arv was able to deliver a scale, working model. The final drone would be fifteen feet long and about three feet at its widest point—not including the twin ducted turbine blades.

They invited Tom’s father and Bud to watch the first underwater tests of the model. Tom attached the micro-thin wiring harness that would send control signals to the model while Bud prepared the large pressure tank. Tom wanted to see how well the drone might maneuver under the pressures expected more than one thousand feet below the ocean’s surface.

The initial test went fairly well, but after reviewing the data he believed that the scaled-down turbine blades were not providing real results.

He called Dianne Duquesne, the head of Enterprises’ Propulsion department. She arrived fifteen minutes later.

After a brief description of the issue and a read through of the first results, Tom repeated the underwater test. She watched the readouts carefully as he increased and decreased spin, reversed one or both blades, and put the model through a series of tight maneuvers.

While Bud and Arv retrieved the model and shut down the tank, Tom and Dianne talked about her thoughts.

“I would say that you’re right, Tom. Small turbine blades like those are going to react in a non-scalable manner under the pressures you exerted. My guess is that things are off by a factor of between twenty and forty percent. In your favor, by the way.”

They agreed that the only way to tell would be to build a full-scale model.

Tom’s father only had one word of caution to say. “If you are going to build a full-scale model, I’d make it more than a model. Aim for it to be a true test bed where you can swap out different blade systems and perhaps even outer case panels. You might end up with those ducts larger or smaller to get optimum thrust before you’re done.”

Tom agreed.

Working with Arv and Hank Sterling—Enterprises’ chief pattern maker and the man who ultimately set up the patterns and jigs for the various pieces to be built and assembled into the final product—Tom and Bashalli tweaked and adjusted the design until it could be successfully built. Five days later, much to Tom’s surprise, Hank called to tell him that the test prototype was ready to be occupied.

“Just needs all your little fiddling bits and components in it now, skipper.”

Because Tom had pre-built much of the inner workings, it only took two more days until they had the first *SeaSpear* complete.

The test in the pressure tank showed that Dianne Duquesne had been correct. They actually were seeing about thirty-six percent better propulsion thrust and turbine speeds, and about five percent greater resistance against the blades. This meant a faster drone but with slightly less battery life.

Two days after that, Tom, Bud, Bashalli and Tom’s sister, Sandy, loaded up the *SeaSpear* into the hangar of the *Sky Queen* and jetted out to Fearing Island, the Swift’s combination rocket/submarine base off the coast of Georgia.

The two boys took turns putting the *SeaSpear* through its paces. Both declared it to be an amazing vehicle. Sandy and Bashalli both asked if they could, “just lie in it,” for a few moments. Neither had the desire to go scooting off underwater in the small drone, but they both came back out with big grins on their faces.

When Tom contacted the British Admiralty he suggested that security might be better at Fearing, so it was arranged that the first demonstration would take place a week from that Saturday.

On the appointed day, a large military transport jet radioed for clearance to land. Tom’s air drones were moved out of the way and the RAF jet came in for a landing.

Tom was a little startled to count fifty-three people in the contingent. It was explained to him that “somebody from every department even slightly involved had insisted on coming,” and it was felt that politically it was the wise thing to accommodate all of them.

Tom had hoped to take a group of five or six down in his larger Jetmarine to watch. That was now impractical, so he arranged for his small, original Jetmarine to be fitted with several cameras. It would shadow the drone as it went through its paces with Bud at the controls.

After a thorough tour of the actual sub, everyone crowded into the largest conference room on Fearing and watched in wonder as the big screen TV showed them the drone lazily moving along and then suddenly zipping ahead, almost too fast for the camera operator in the Jetmarine to follow.

They saw it loop and barrel roll, stop and reverse and almost spin on a dime at slow speed.

An hour later the demo was declared to be a rousing success. Following a lunch celebration, the Brits took a video of the test with them and returned to England.

Five days later, Swift Enterprises received an order for one hundred of them, and a potential follow-up order of an additional thirty.

It wasn't until six months later that Tom heard anything about his *SeaSpear* drones. At that, it was an indirect mention when a news item came on television saying that an old diesel-electric submarine had been forced to the surface of the North Sea off the coast of Scotland and its Kranjovian crew taken into custody.

While no mention of the exact location was made, Tom was fairly certain that it was very near one of the first underwater power stations under construction.

He smiled.