

Soliton

A novel by

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Chapter One: 7.17 am May 3rd - South of Newport, RI

Damn Koslovski! What an asshole! Why didn't he come with us instead going to Europe looking for funding for my wave-energy patents. Everyone wants to harness wave energy to generate

electrical power and I own the patents. He's touting it as solving the world's energy crisis. With little else to do as he steered *Wave Rider*, his Beneteau 411C sailboat, oceanographer Dr. George Madison thought about his Russian immigrant partner and the vitriolic fight they'd had the previous day.

"I invented it and know it's too big a project for us right now," he'd told Koslovski, who was getting a few last minute items from his office in Woods Hole before driving to Boston airport. "If it fails, we'll go bankrupt. We have to license our patents for income. When we have enough cash flow, we can do it ourselves."

Zhopa!" Koslovski swore. He flapped his hand at Madison, his nicotine stained fingers and bitten down fingernails putting Madison in mind of a taxi driver. "You have the patents. We need to do it now. Not when we are big. It is what makes us big!" Koslovski yelled, his face red, his voice harsh with a smoker's rasp. He slapped his hand with his fist in frustration. "I have funding. We take no risk. I have much time into it. I not stop now!" With that he'd stalked out, slamming the door.

"Koslovski had just called him an asshole! "You'll have to license my patents," Madison yelled angrily at the closed door.

Nikhuya sebe! Your patents belong to the company. We can develop them any way we want. This project make us big!" Koslovski shouted from the hallway outside the room.

"Fuck you too! You can't use them without my permission."

"Then we split and I license your patents." Madison heard the outer door slam and the tires squeal as Koslovski's car sped out of the parking lot.

He corrected his course slightly, bringing his attention back to the boat. The forty-one foot yacht had spent the winter in the Concordia Boatyard in Padanaram, Massachusetts, and this was the first trip of the season, the one that took Madison's yacht to Newport, Rhode Island, for the summer where he owned a condo and a yacht club membership. He and the professional captain, James Alerbee, who took care of the boat, had spent the night moored snugly off the Concordia docks, and at four a.m. they'd quietly gotten underway. Now the smell of bacon and fresh coffee wafted up from down below.

A glint on the water to the south caught his eye. *What the hell's that?* Madison scratched the stubble on his two-day beard as he stood on tip-toe in the cockpit and stared across the water's surface. The May morning's pink sunlight reflected off a large perturbation in the sea's surface. He stared at the rolling mound as he sipped the steaming coffee Alerbee had just passed to him. *It's like a giant bump in the middle of the water. What on earth is it? Is it a ship? Is a navy submarine?* Madison looked for a submarine sail, but saw nothing. He took a bearing on the boulder-like mound. *Just east of southeast. Look at it! My God! It's just a wave, but man, it's a giant! Where the hell did it come from?* He turned on the autopilot and stepped away from the steering wheel of *Wave Rider*.

Pulling back the hood of his foul weather jacket to better hear he turned up the volume on the VHF radio. "... The forecast for Block Island Sound and coastal waters. Winds light, three to five knots, increasing this afternoon to fifteen knots out of the southwest." *No wind this morning. No disturbances. So what the hell caused a wave this big? It's got to be the wake of a boat, but it'd have to be a hell of a boat to make a wake like that!*

"Hey, Jim, Come up here. What do you make of this?" He waited impatiently for Alerbee to come on deck.

Alerbee lifted his sun glasses revealing startlingly blue eyes, their corners crow-footed from too much time at sea, and stared at the mound gliding across the ocean surface. Then he scanned the horizon looking for a vessel that could have made such a wave. There was no ship, nor cloud in sight. He looked back toward the disturbance that marred the otherwise calm sea.

"That's bloody strange," Alerbee said. His English accent very pronounced in the early morning. "Ain't never seen anything like that before." He sniffed. "Christ! Bacon's burning." He ran down the four steps into the cabin and Madison heard him pull the pan off the stove.

He turned back to the wave. It was larger, much larger. As he watched, it grew from a pronounced bump into a cottage sized wave. *Jesus! Look at that thing. It's getting bigger, not dissipating like a real wave. What the hell caused it? It's heading directly toward us!*

A flash of sunlight on the wave pulled Madison back to the present. It was nearer, now the size of a house. *Damn, it's twenty, no, maybe thirty feet tall. Why couldn't it have come when we were in the channel?*

"Hold on. I'm going to try to get ahead of it," he called to Alerbee. He pushed the throttle forward. To his north the old Sakonnet Point lighthouse silently flashed to guide mariners away from the rocky shore. Slightly to the east of south, Buzzard's Bay Lighthouse flashed every 2.5 seconds. From here to Newport the open sea lay to their south, the city shoreline to their north.

As Madison ran a hand through his graying hair he realized he was watching a spectacular event – a single large wave, coming at him from somewhere out in the deep ocean. *A tsunami! Holy hell! Could it be? Has there been a volcanic eruption somewhere? Has the volcano on Las Palmas erupted and caused a tsunami? If it is a tsunami, can we ride it out?* "Hey Jim," he called. "Put the radio on. I'd like to see if there's an eruption that may have caused this wave."

Minutes later the announcer for WINS 1010 news in New York came through the cockpit speakers. Neither the FM nor the VHF radio mentioned a disaster.

Then Madison remembered a technical paper about that Koslovski had showed him. He'd called them solitons. He said they were single, fast-moving, tsunami-like waves that spring up in various parts of the ocean. A technical paper that had made headlines around the world a couple of years ago from the European Space Agency said that there were many of these huge waves in the ocean, most of them unseen. They simply appear and then fade away with few people ever seeing them. *Now I get to see one. But it doesn't look like it's going to fade any time soon.*

As he watched, he focused on the wave. *What an opportunity! It's getting into shallower water and starting to crest. It'll crest and break on the west end first, farthest from us. That's good. It's a fixed length about a half to three quarters of a mile long, so it's not a tsunami. It's... This is a real soliton! Damn, I'm lucky to be able to see it!*

He tried to remember what he knew about these waves. *Nobody's ever seen one in the ocean before. What a phenomenon!* He smiled, pleased that he'd be the first oceanographer to see one. He took two paces forward. "Hey Jim, want to see a giant wave. Nobody's ever seen one like this before. Come and look." He took his cell phone from his pocket and snapped three images of the monster wave. "Shouldn't hurt us in waters this deep," he told Alerbee. *Man! I'll have something to write about that nobody has ever seen outside of a canal or ship testing tank. Damn! This is good luck! I'll write a paper on it. It'll make me famous. Passing through a large ocean soliton, I'll call it.*

The wave took seventeen minutes to traverse most of the distance from the horizon to the boat. Madison read the depth under the yacht. *It's in a hundred and twenty feet water and growing. Holly Jesus! This is one big wave. What a wave! It's a real surfer's wave, the only one of its kind ever seen. It has to be at least two hundred feet deep for it to be this big, this far from land.* He took two more photographs and grinned with pleasure as he turned the boat southeast to face into the wave. *Going directly into it will minimize the impact on the hull.*

He rammed the engine to full ahead to get through it before the crest broke. *Oh my God! Look at that thing; it's incredible. It must be sixty, seventy feet high, coming at us at about thirty miles an hour... Can we make it?*

The trough in front of the wave gaped with black diamond steepness, something he'd never seen before at sea. He'd heard about tsunami waves sucking all the water out of a harbor, but this wave was still in hundred-and-fifty-foot deep water.

He pointed the yacht's bow directly at it and pushed the throttle forward. The boat dived down the slope. The speedometer climbed – seven and half knots, nine, eleven, twelve, then fourteen knots. The boat vibrated and shook like a minor earthquake, a sign that it was gliding over the water's surface faster than it had ever done in its three-year lifetime. It bottomed the trough, the wave crest higher than the mast. The vibrating stopped as the yacht pitched upwards into the near vertical wall of water. *Oh my God! We'll never get through it. Oh God! Shall I turn around? If I turn now we'll be rolled over! Oh Shit! We'll never make it!*

"Jim. Get harnesses for both of us." If they tied themselves to the ship with safety harnesses, at least they'd stay aboard. With his right hand he held the throttle lever tight against its stops, willing the boat to go faster. He crossed himself as the boat dove into the wave front, suddenly tense with fright. "Lord, get us out of this in one piece," he muttered, but only Alerbee heard him and he was staring at the giant wall of water, his mouth wide open, the harnesses hanging loosely in his hand.

"Oh my God!" Was the last voice Madison heard over the sound of millions of tons of solid green water turning into a white-fronted waterfall as gravity overcame the solidarity of the water.

The breaking crest slid along the wave top, rolling a giant tunnel into the wave face like a surfer's wet dream. *Oh God! We have to get through it!*

Madison forced the throttle, feeling something bend as he desperately tried to get the boat to go faster, his eyes wide, his stomach a tight knot. Unable to look away, he stared into the towering, curving crest as it blocked the sky. Alerbee grabbed hold of a rail as the boat tipped radically upwards. It slowed as the huge wave peaked directly above it.

“If we can only break through! If we aren't going fast enough, the wave will drive us back! Oh my God! Look at that thing!” Madison heard yelling and realized that it was him. Both men held on with white knuckled grips, the harnesses forgotten as the soliton engulfed the yacht in a moving cataract of white, hissing, foam-laden water.

“We've got to get through it. Please God help us.” Madison shouted, staring at the wall of green and white, as it roared down on them. The clamor drowned any conscious thought. The bow rose as the cataract descended on the yacht. Reflexively Alerbee stretched forward and pulled the companionway hatch shut as if they might survive with it closed. Their only chance of survival was to hope that *Wave Rider* would live up to her name.

They never knew that it was already too late. The bow rose. Fifty degrees, sixty, seventy. Madison leaned into the wheel, trying to stay vertical. Alerbee's grip on both cockpit rails kept him in place as the boat stood on its stern.

They were in the tube, the yacht climbing, its engine straining, trying to overcome gravity and break through the crest. The seething white avalanche of water hit. Hundreds of tons of foaming, hissing, roaring water crashed down on the fiberglass hull, driving it deep into 42 degree water. Madison choked as the tumult engulfed them. He had no idea that the boat was sliding backwards as the wheel twisted out of his hands. The rudder skidded to one side, and the boat turned sideways. The mast rolled to 90 degrees, then to 120, 180, 270 and back upright, although Madison couldn't see the horizon to know. On the first roll, the mast snapped off cleanly at the deck. By that time Madison had lost his grip on the wheel and was lying against the lifelines. The coldness of the water had taken his breath away. His head had gashed wide open on the binnacle as the boat came upright for the first time. His blood mingled with the seawater around him. He tried to touch his head to see how badly he was hurt, but a second roll inverted the boat and threw him clear of the lifeline – except for his arm, which jammed under the steel pulpit rail and broke in three places. The extreme pain forced Madison into a frantic state of consciousness. Then the broken boom slammed him in the head and chest. By the time the boat rolled a third time his body was nowhere to be seen.

The broken mast slashed through the cockpit, gashing a hole nearly four-feet long through the thin fiberglass skin and stabbing into Alerbee's leg. He screamed with pain, his blood mingling with seawater. The boat rolled and the still screaming Alerbee was pinned by the mast as the vessel descended to a depth that no human could withstand for long. Within three minutes all that remained of George Madison's superb yacht were broken bits of wreckage lying on the seabed.

The wave continued past the destroyed yacht, rolling toward the unsuspecting land on the eastern side of Newport. It slammed into Schuyler Ledge, the rocky reef to the south of the Sakonnet Point Lighthouse. Boulders as large as houses washed onto the beach and tumbled like giant bowling balls. One scored a direct strike on a house near the waterfront, shattering it like a set of ninepins. The red bell buoy off the point was torn from its mooring and thrown ashore so far inland that it rolled down a blacktopped country lane and came to rest against an old tractor. Part of the wave hit the west side of Aquidneck Island, bordering the entrance to the Sakonnet River. It slammed across the land owned by the Norman Bird Sanctuary, wiping away its headquarters building before racing across open fields and smashing against wooden buildings and ancient stone walls. Neither survived the impact.

The middle part of the soliton continued up the Sakonnet River, reflecting and refracting off the banks as it smashed homes, boats, and beaches until it came to the low lying Island Park and the narrow section of the river where the old railroad bridge had been torn away by the devastating 1938 hurricane. It was here that it crashed on the shoreline with terrible vengeance, making the hurricane damage seem minor. Homes were driven backwards off their foundations and into other buildings. Trees were uprooted, or snapped off and hurled like gigantic javelins.

The eastern most section of the wave tore into Easton Point ripping homes apart and smashing them beyond any hope of restoration. It roared across First and Second Beaches to the east of Newport. The craggy cliffs sixty to eighty feet high, topped by the Cliff Walk and the fabulous mansions of the Newport elite of years gone by, provided a barrier that prevented the wave from going into downtown Newport, but instead channeled it across the four-lane highway and into the lagoon beyond. The giant soliton turned into a bore constrained by the natural ridge of Aquidneck Island as it roared across the lagoon and into the residential area beyond. It wiped away vehicles, homes, and flattened old growth trees as it thundered northwards to dissipate in parking lots and back gardens more than a half a mile inland. When the great wave finally subsided there was nothing left but bodies and matchwood piled upon the shore.

When they dragged up the remains of *Wave Rider* a week later, Madison and Alerbee had been declared missing believed dead. Three weeks later, the major portion of *Wave Rider's* mast was dragged up by a fishing trawler.

In all, 1,384 residents of the east side of Newport and Middletown died that morning as they slept. Killed by a wave they never heard nor saw. Thousands more were injured. Damage was estimated at almost two-hundred million dollars and nobody had any idea where the soliton had come from.

Newspapers around the world carried news of the disaster. *Giant wave strikes Newport region.... The City by the Sea becomes the sea's victim....* Rescue agencies descended on the rubble, trying desperately to restore the idyllic pre-soliton world. But it was no use. A persistent sense of unease had descended on the coastal community. Two, then three commissions were instituted in Washington, as politicians safely away from the center of the disaster tried to find out how it had happened.