

"THEN THEY DID IT! ON AUGUST 15, 2006, MY BROTHER JOHN AND I RECEIVED AN EMAIL FROM THE SHIP THAT THEY WERE NINETY-FIVE PERCENT CERTAIN THEY HAD FOUND THE *GRUNION*. IT WAS JUST UNBELIEVABLE! . . . WHEN THE SUB WENT DOWN, IT STRUCK A RIDGE ON AN UNDER-WATER VOLCANO, THEN SLID THREE-QUARTERS OF A MILE TO ITS FINAL RESTING PLACE. THAT TRACK IN THE SEA FLOOR WAS SO OUT OF PLACE; IT WAS ESSENTIALLY THE DEBRIS TRAIL WE WERE LOOKING FOR."

—BRUCE ABELE, SON OF USS *GRUNION*
SKIPPER LT. CMDR. "JIM" ABELE

No 4



NO LONGER HIDDEN

USS GRUNION (SS-216)—LOST WITH ALL HANDS

"FOR SOME REASON WE ALWAYS CALLED HIM 'JIM,'"

Bruce Abele said in his soft-spoken New England accent. One could hear the caring and fondness filling his voice as he reflected on his father, Lt. Cmdr. Mannert L. "Jim" Abele, skipper of the World War II *Gato*-class submarine USS *Grunion* (SS-

216). Bruce and his two brothers, John and Brad, were only kids when their father and his sixty-nine shipmates went missing during the dark, early days of World War II.

Bruce is now in his eighties, and, like his brothers, he is a man of many accomplishments. In Bruce's voice one can hear the sense of self-imposed responsibility—responsibility to the families of each man aboard the



One of the few surviving photos of Lt. Cdr. Mannert L. "Jim" Abele in uniform. Before taking command of *Grunion*, Abele commanded the submarine *R-13*. He was a very experienced submarine captain and was highly regarded by his men and his peers. The World War II *Sumner*-class destroyer *Mannert L. Abele* (DD-733) was named in his honor. Courtesy of the Abele family

sub, a mission that continues to this day, more than seventy years after *Grunion* went missing. That determination led to one of the Abele brothers' greatest personal achievements: finding the final resting place of their father and his crew, thereby bringing closure not only for themselves, but for the families of *Grunion*'s crew.

Yet Bruce and his brothers did not find the sub alone. Solving the mystery of *Grunion* was a journey that took time, technology, resources, and, above all else, the generosity of others and a cadre of collaborators from around the globe.

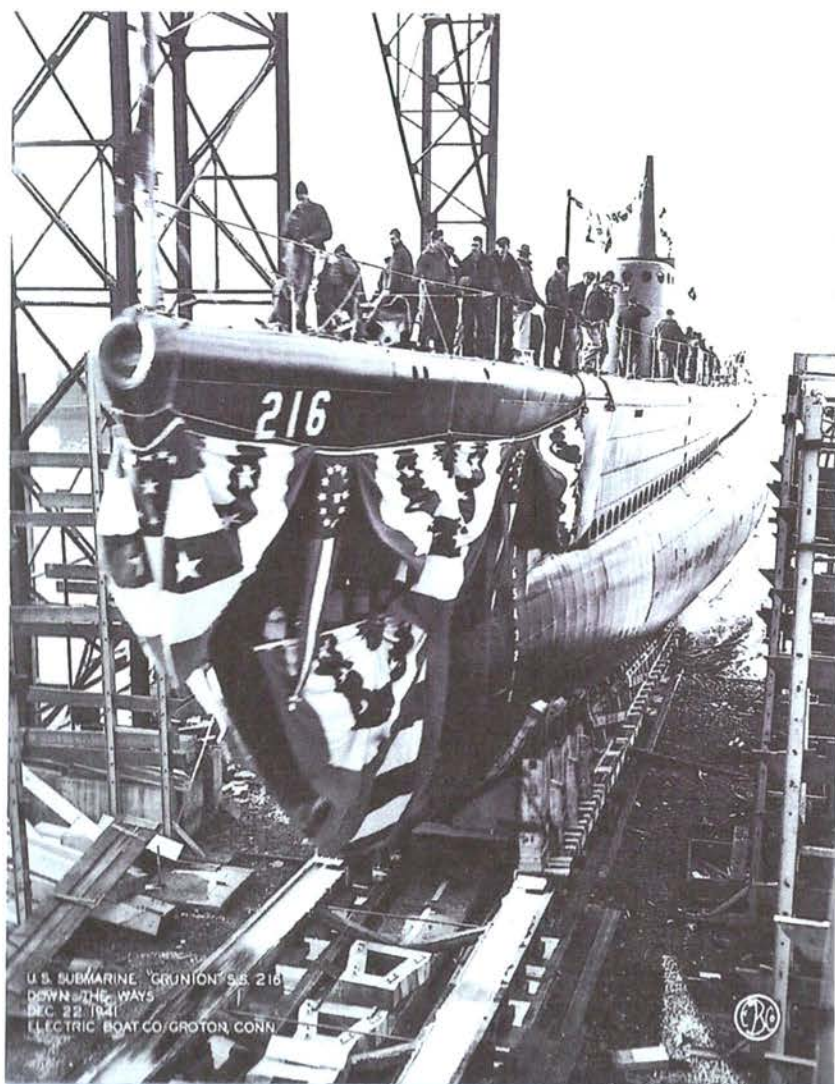
GRUNION WAR PATROL: ENGAGING THE ENEMY AT KISKA
Margaret N. Hooper, wife of Adm. Stanford C. Hooper, broke the traditional bottle of champagne across the bow of *Gato*-class submarine USS *Grunion* (SS-216) on December 22, 1941. The submarine slid down the ways at the Electric Boat's Groton, Connecticut, shipyard as invited guests looked on. Lieutenant Commander Abele had previously commanded the submarine *R-13*. His new boat, *Grunion*, was commissioned at Submarine Base New London, Connecticut, on April 11, 1942, and for the next six weeks the skipper put his newly built vessel through its paces. A test dive to 315 feet and torpedo trials in Long Island Sound were included.



The Abele brothers—from left to right, John, Bruce, and Brad—always wondered what happened to their father, his shipmates, and their submarine. Each had successful careers and raised families, and it was only in later life that time, technology, resources, and opportunity to collaborate with others all came together enabling them to solve the mystery of *Grunion*'s final resting place. Courtesy of the Abele family

On May 24, *Grunion* sailed for the Pacific theater of war. As it zigzagged along the eastern seaboard, Abele worked to identify each vessel he came across. On May 29, *Grunion* passed from the Atlantic Ocean into the Caribbean Sea, cruising submerged past Mayaguana Island and through the Windward Passage.

En route to the Panama Canal on May 31, *Grunion* came across sixteen survivors from the Army Transport USAT *Jack*. The ship had been torpedoed by the German U-558, and the survivors floated in their damaged lifeboat for 108 hours



U.S. SUBMARINE, GRUNION SS-216
DOWN THE WAYS
DEC. 22, 1941
ELECTRIC BOAT CO. GROTON, CONN.

The Gato-class submarine *Grunion* (SS-216) slid down the ways at Electric Boat's Groton, Connecticut, yard on December 22, 1941, just weeks after the Japanese attack on Pearl Harbor. She was lost in the Aleutian Islands eight months later. US Navy

until they were rescued by *Grunion*. One other raft was known to have cast off from the sinking transport, but after a dedicated search, Abele was forced to continue his journey. Those men were never heard from again. Steaming across the Caribbean Sea, *Jack's* survivors were landed at the submarine base at Colo Solo, Panama Canal Zone, on June 3. Among those rescued were the *Jack's* chief mate; Peter Korb; first engineer, George F. Drew; and Lt. j.g. A. O. Lund, chief of the ship's Naval Armed Guard.

The submarine transited the Panama Canal on June 6, 1942, and crossed the eastern Pacific Ocean without incident. A couple of ships were spotted as were a



First Day Cover commemorating the commissioning of the submarine *Grunion*, April 11, 1942. Author's collection



Grunion is seen during trials on Connecticut's Thames River near the Navy's New London submarine base. The submarine was 311 feet 9 inches long, with a beam of 27 feet 3 inches. She could travel more than eleven thousand nautical miles at ten knots while surfaced. US Navy

few US patrol planes. The voyage took seventeen days with the boat arriving at Pearl Harbor on the morning of June 20. *Grunion* sailed into Pearl Harbor, past the overturned battleship *Oklahoma* and the wreck of the once-mighty *Arizona*, sitting on the bottom of the harbor. The crew could see salvage workers attending to each ship. *Grunion* was tied up at the undamaged submarine base, the reason for her mission visible across the channel.

At Pearl Harbor, *Grunion* underwent a rigorous training schedule to get the boat and her crew into top fighting condition. The submarine would conduct torpedo attack training using Mk 14 exercise torpedoes modified so they could later be retrieved and used again. Once torpedo training was done for the day, the tables were turned and the submarine served as a target for US destroyers attempting to track the sub using sonar and as a target for depth-charge runs. *Grunion* used this part of the cat-and-mouse game to perfect its ability to hide from its pursuers.

The weekend of June 26–28 was probably spent on one last liberty call as *Grunion* got underway at 9:05 a.m. local time on June 30. *Grunion*'s ultimate destination would be the Aleutian Islands, specifically in the area around Kiska Island. The Japanese had occupied both Attu and Kiska on June 3 and 4, simultaneous to their attack on Midway Atoll.

With Oahu passing by the stern that afternoon, *Grunion* attacked a training target in Kauai Channel, firing ten rounds of 3"/50 from the deck gun, and some .50-caliber machine gun fire raked the target as well.

Official Navy understanding of *Grunion*'s activities for the period July 15–30 is very sketchy. Radio transmission was poor, and there were only four brief and somewhat confusing communications from the sub, some of them being repeats.

It is known that on July 15, *Grunion* attacked and sunk what was believed then to be three destroyers. (After the war it was determined that they were sub chasers and that only two were sunk.) *Grunion* made several other attacks, but the results were unconfirmed.

In his memoir *Submarine*, Capt. Edward L. Beach, communications officer on *Trigger* (SS-237), reported decoding the following *Grunion* message:

ATTACKED TWO DESTROYERS OFF KISKA HARBOR NIGHT PERISCOPE
SUBMERGED X RESULTS INDEFINITE BELIEVE ONE SANK AND ONE
DAMAGED X MINOR DAMAGE FROM COUNTERATTACK TWO HOURS
LATER ALL TORPEDOES EXPENDED AFT.

It was not dated, so its relevance is difficult to assess. Beach ends his description of *Grunion*'s message with the comment that it decoded perfectly up to a point and then became a jumble.

That afternoon, July 30, *Grunion* was ordered to the American naval base at Dutch Harbor on Unalaska Island. In her acknowledgment of the order, *Grunion* gave the following report:

WITH VISIBILITY 400 YARDS HEARD ECHO RANGING SHIPS NEAR
SIRIUS POINT WHICH DROPPED NUMEROUS DEPTH CHARGES
X EVADED THOSE VESSELS IN HOPES CONTACTING CONVOY X
NOW BELIEVE VESSELS WERE MERELY ASSIGNED PROTECTION

HARBOR MODERATELY HEAVY GUNFIRE TO NORTH OF KISKA X
HAVE TEN TORPEDOES FORWARD REMAINING X FROM UNIT EIGHT
FIVE SIXTEEN.

On August 1, *Grunion* was radioed to continue her voyage to Dutch Harbor, and in a twist of fate the submarine was to expect to reload and re-provision the boat and be back at sea on August 3. There was no confirmation of that message. All further efforts to communicate with *Grunion* were unsuccessful.

With the realization that *Grunion* would never reach port again, the submarine was decommissioned, on paper, on October 5, 1942, and listed as "Missing. Cause Unknown."

Jim Abele was awarded the Navy's highest honor, the Navy Cross, for his actions in the Aleutians. Abele's widow, Kay, felt the award belonged to all of the men of *Grunion* and acquired the addresses of every man's next of kin. She wrote each family a letter sharing that the Navy Cross belonged to the submarine's entire crew. She received many letters in return, a correspondence that would prove valuable more than sixty years later.

After the war, Japanese records were combed for any clues of *Grunion*'s fate, but nothing was forthcoming. The submarine remained on the record as missing, cause unknown, for sixty-five years.

THROUGH THE GENEROSITY OF OTHERS

The sea does not give up its secrets until it is ready, and in the years following World War II, a few clues to *Grunion*'s activities came to light, but they would go unnoticed until a diverse group of people crossed paths.

In 1963, Seiichi Aiura, a Japanese freighter captain who was on *Kano Maru* off Kiska Island at the end of July 1942, wrote an article about an encounter with a submarine in a seafarer's journal titled *Maru*. Written in Japanese, the article was printed, then archived, and soon faded from memory.

Thirty-five years after Aiura's story was published, in 1998, retired Air Force Lt. Col. Richard Lane was browsing in an antique store in Denver, Colorado. In a pile of World War II memorabilia, Lane found a wiring diagram for a deck winch. The diagram was covered in Japanese characters and was marked for a ship named *Kano Maru*. Lane paid one dollar for the intricately marked sheet, took it home, and filed it away.

Two pieces necessary to solve the whereabouts of *Grunion* were now in place. They would be important pieces in bringing a number of people together who could, collectively, solve the mystery.

In the years after the end of the war, life was busy for the Abele family, yet they often wondered what happened to Jim, his crew, and his submarine. With reverence for their father and his men, the brothers built their lives. The oldest of the three, Bruce, went into computers; middle son Brad (1933–2008) graduated from Yale University, became a naval aviator, and flew A-4 Skyhawks during his career; and youngest son John cofounded the medical device manufacturing firm Boston Scientific.

After retiring, Brad began writing a history of his father titled, simply, *Jim*. The *Jim Book*, as the family calls it, was intended for distribution to descendants and friends, and no one ever expected it to go any farther. While writing the book, Brad made contact with many of the men who had served with Jim Abele, and the book



The Japanese freighter *Kano Maru*, seen here beached on Kiska Island, was *Grunion*'s target that fateful day. *Grunion* fired six torpedoes, one of which exploded in *Kano Maru*'s engine room, causing the list visible in this photo. Richard Lane Collection

would serve, at that time, as a chronology of what was known of *Grunion*'s loss and how Kay Abele handled a difficult living and financial situation in the years following the sub's disappearance.

In 2001, Richard Lane became curious about *Kano Maru* wiring diagram and searched the Internet for information about the ship. Unable to find anything, he posted scans of the diagram on the Japanese military history website J-aircraft.com, not expecting to ever hear anything about the obscure ship. The following day, the J-aircraft.com message board had a post from a gentleman living in Japan named Yutaka Iwasaki. Along with information on *Kano Maru*, Iwasaki attached his translation of the obscure, first-person story written by Seiichi Aiura detailing *Kano Maru*'s encounter with a submarine that appeared to be *Grunion*. Lane contacted Darrell Ames, public affairs officer at Commander, Submarines, Pacific (COMSUBPAC), who felt it important enough to post the information on their *Grunion* website.

Bruce's oldest son is named Kurt. His fiancée at the time, Alicia, worked with a gentleman named Ronald Vartanyan, a World War II history buff. Alicia shared the *Jim Book* with him, and Vartanyan sent Bruce a number of *Grunion* websites for review. Bruce followed his advice and at that point discovered COMSUBPAC's post sharing Iwasaki's information about the loss of *Grunion*. Needless to say, because it

was the first clue to the loss, it created immense excitement in the Abele family and started an extensive search for contact information with Iwasaki.

Searching the web, John Abele finally found Iwasaki's email address. He sent a note asking, "Are you the one who knows something about *Grunion*?" He received a note back saying, "It's me, I pray for the repose of your father's soul." The one-dollar blueprint found in an antique store led the brothers to a man in Japan who would continue to play a pivotal role in locating *Grunion*.

Several years later while attending a medical conference in Florida, John attended a presentation by Bob Ballard, the man who led the teams that discovered *Titanic*, *Bismarck*, and numerous other historic shipwrecks. Ballard and John got to talking about the search for *Grunion*, and there was the thought of hiring the famous explorer to aid in locating the submarine.

Schedules did not work out as Ballard was booked for the next season, but he did give the brothers a "Submarine Search 101" class. Ballard educated the Abeles on using side-scan sonar for the initial search and examining the most promising contacts with a remotely operated vehicle (ROV), as well as a frank discussion about the strengths and limitations of each technology. Ballard told the brothers they could expect to cover two hundred square miles of sea bottom in about two weeks' time—if the weather was good—and that rocks and other geological formations could distort sonar images and even hide entire ships. Repeating his proven search method used on *Titanic* and *Bismarck*, Ballard told the brothers to "follow the debris trail." In addition, Ballard encouraged the brothers to develop a better picture of where exactly the sub might rest, in order to improve their odds at finding it.

After Ballard's visit, the brothers were more enthused about the potential of a search, but there were still huge obstacles ahead of them. The brothers needed to address issues such as what type of vessel would be best for the search in the rough waters around Kiska, where does one rent a side-scan sonar capable of doing the job, and where on the surface of the ocean to start the search.

It is a small world, and after what started as a chance encounter with Bob Ballard, Bruce's wife, Susan, was a dinner guest at her neighbor Arlene Lowney's home. That evening the two ladies were discussing the *Grunion* search and its difficulties. Lowney mentioned that her son Pete had recently returned from fishing the crabbing grounds in the Bering Sea. Susan put Bruce in touch with Pete, and shortly afterward



During the search for the *Grunion*, Yutaka Iwasaki, center, flanked by John Abele on the left and Bruce Abele on the right, was instrumental in many aspects, most notably finding the documents that narrowed the search area from two hundred square miles to virtually pinpointing the exact location. Courtesy of the Abele family

the two men had a long discussion about the Aleutian Islands and the hazards of working and sailing there. During the conversation, Pete Lowney referred Bruce to a fishing boat captain named Kale Garcia, owner of the crab boat, *Aquila*, that worked that area in the Aleutians.

Aquila is a 165-foot-long vessel with its wheelhouse forward, leaving a large, open deck that covers the entire aft section of the ship. *Aquila* had been built to service the oil exploration industry, then converted to a fishing vessel. Two cranes, one on each side of the deck, are used for handling crab pots and other fishing gear, and they would be ideal for lifting, launching, and recovering the side-scan sonar sled and ROV. *Aquila* was crewed by Garcia's wife, Anji, and their two teenagers, daughter Kensie and son Tanner.

"I called Kale Garcia, and it just so happened that there was an opening in the boat's schedule and they could handle a trip in August. He was very willing," Bruce said. "I don't know if you know what it costs to rent a boat to go out to Kiska, but it's beyond comprehension. Kale Garcia was absolutely fascinated with the mission and offered to do it for a very, very reduced figure, which made a tremendous difference. On the other side of the coin, we still had to get a side-scan sonar company to assist us, and Garcia named a company he thought might be able to help."

Bruce phoned the sonar company referral, but their equipment could not go deeper than one thousand feet. They in turn referred him to Williamson and Associates in Seattle, where, coincidentally, *Aquila* was berthed. A bit leery of the job of looking for a lost World War II submarine proposed by a man on the phone, Art Wright from Williamson and Associates went to see if *Aquila* would be



Aquila is owned by Anji and Kale Garcia, and their teenagers, daughter Kensie and son Tanner, are valued members of the crew. Kale's interest in helping to search for *Grunion* enabled the submarine to be found at long last. Courtesy of the Abele family



Aquila, 165 feet long, was originally constructed as an offshore oil-industry support vessel. It was later converted for the fishing industry, and its two cranes, one on each side of the deck, were ideally suited for sonar tow fish and ROV operations. Courtesy of the Abele family

appropriate for the job. It was a little rough, but it looked like it would work. John Abele happened to be in the area at the same time, and a contract was consummated.

But before an expedition could be mounted, the Abele brothers heeded Bob Ballard's advice—narrow the search area as much as possible before leaving the dock. At this point, the search area was two hundred square miles of water off the north end of Kiska Island, one of the most inhospitable places on the face of the Earth.

The Abele brothers needed a more precise location for their dad's submarine. It was Yutaka Iwasaki who came to the rescue. Iwasaki knew a gentleman named Minoru Kamada, who had access to the archives at Japan's National Institute of Defense Studies. Iwasaki traveled by train overnight to meet Kamada to visit the institute, and the pair arrived at the next morning at 6:00 a.m., only to find it did not open until 9:00. Once inside, the archivist informed the weary travelers that the institute did not hold any information about noncombat vessels. "Undeterred, they did a little looking anyway, and in about five minutes they found a pile of two hundred and seventy documents, all about *Kano Maru*," said Bruce. "There they found a document that gave us almost the exact location of where the confrontation had occurred!"

A story in a magazine. A wiring diagram for an unknown ship under a pile of stuff in a Colorado antique store. A chance meeting with the world's foremost shipwreck explorer. A dinner conversation, a late-night talk with a fishing boat captain,

a boat with time to fill in its schedule, a sonar search company that took a chance, and two tired guys not taking no for an answer at an archive halfway around the world. All combined to present the approximate search area for *Grunion*.

ON THE HUNT

Williamson and Associates had to manage the logistics of getting everything required for the search up to Dutch Harbor and on to *Aquila*. In Seattle, a barge was loaded with two side-scan sonars, two very large winches, several miles of cable, and two forty-foot containers that would serve as the sonar shack and the search headquarters. The barge was towed up to Dutch Harbor and its contents transferred and secured on *Aquila*. It was only while the barge was en route that the team learned of Iwasaki's discovery, which greatly narrowed the search area. The 2006 search effort was underway.

The Kiska area is volcanic. The indications were that the sub was on the side of an "extinct volcano that sloped away to the north with deep ridges almost the height of a reasonable-size office building," said Bruce. "Now the problem was they were dragging the side-scan behind the boat and it had to be lowered down into the valleys. If you saw a target, you had to let the side-scan sled move horizontally; up-and-down movement would give unusable images, so it had to be held steady and then reeled in very rapidly so that it wouldn't hit the ridge on the other side. If it did, a three-million-dollar sonar would be lost.

Considering the plans for the 2006 search, the Abeles felt that it was appropriate to attempt to notify the relatives of the crew. Bruce's wife, Susan, while surfing the web, came across a woman named Rhonda Ray. Bruce wrote Ray a note saying: "This is a stab in the dark. I am under the impression that you are a relative of somebody who was on *Grunion*. This August the three sons of Mannert Abele are sponsoring a search for *Grunion* based on new evidence that has been provided because of a Japanese history buff. It is quite a story." Ray wrote back: "Well your 'stab' hit home."

From there Ray located Mary Bentz and Vickie Rodgers, who also had relatives onboard *Grunion*, and the amateur genealogist trio began searching for other relatives of *Grunion* crew. Using Kay Abele's postwar correspondence with the next of kin as a starting point, the women found relatives for every crewmember—not an easy task considering that names and locations had changed over the years.

"At two a.m., early in the morning of August 15, 2006, John and I received an email from Art Wright, the project leader from Williamson and Associates,

saying that they were ninety-five percent certain that they had found *Grunion*," said Bruce. "It was just unbelievable! The target was about twelve miles north of Kiska almost exactly where predicted by Iwasaki and Kamada's search. It appeared to have lost a significant amount of the bow and to have slid two-thirds of a mile down the side of a dormant volcano."

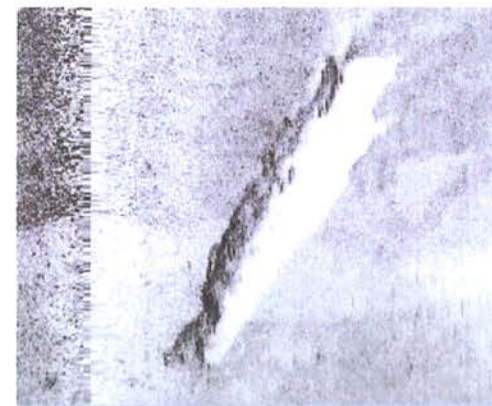
The next year, 2007, John led a second trip to the area, this time with an ROV equipped with HD video cameras, the goal being to determine whether what had been spotted the previous year was *Grunion*. To operate the ROV, the team needed relatively calm waters, else they could break the cable attached and the multimillion-dollar ROV would be lost. "Their first night in the search area they were expecting a storm to blow in," said John. "They lowered the ROV into the water for an all-night search, and within twenty minutes after the ROV got down to the bottom, they spotted the sub."

Then the ROV took a wrong turn and they lost contact with *Grunion*. It took another hour and a half to get back onto the target, which finally happened when they came across the slide path (exactly as Ballard had advised: "follow the debris path"). One of the first anomalies the team noticed was that the aft battery hatch was wide open. This led to early speculation that the crew was making a surface attack on *Kano Maru*.

"The crew of *Kano Maru* reported that the submarine fired six torpedoes," said Bruce. "The first one missed. The second one hit the engine room and disabled *Kano Maru*. The third one was bad, went under the freighter, and didn't explode. The next two hit *Kano Maru* but bounced off, neither one exploding. The last torpedo appeared to have been a circular run, not uncommon in those days, that came around and struck the submarine in the periscope shears, but it didn't explode.

The evidence suggests that the sonar man heard the high-pitched whirring of the torpedo as it changed course and the skipper ordered a hard dive to get out of the torpedo's way. Traveling at fifty-three miles per hour and weighing 3,500 pounds, a torpedo has the same impact velocity as a small car, so it can do a lot of damage—even if it doesn't explode. With the hard dive order, the dive planes were put into a downward position, but the submarine was still not able to get out of the torpedo's way. It was struck in the periscope shears, the structure holding the periscopes; where a significant dent is plainly visible. The torpedo broke both periscopes, in essence blinding the sub, but did not explode.

In analyzing the video of the wreck, it was noticed that the rear dive planes were still in the dive position. The analysts



Sonar image of what turned out to be *Grunion*. It doesn't look like a sub, but it has the length and was certainly at the top of the list of targets to inspect with the ROV. Courtesy of the Abele family



2006, *Grunion* was located on sonar using this tow fish. With a short operational window, a trip the following year was made to locate and visually identify the wreck using an ROV. Courtesy of the Abele family



The *Grunion* search team on board *Aquila*. Front row, left to right: Tanner Garcia, Kensie Garcia, Ian Walt, Gromeko Lekka. Second row, left to right: Peter Lowney, Anji Garcia, Kale Garcia, John Abele, Rich Abele, Rich Keeling, Dave Gallo, Abby Fammartino. Back row, left to right: Toshi Mikagawa, Richard Graham, Joe Caba, Donovan Webster, Mike Nicholson. Courtesy of the Abele family

surmised that during the descent, the dive planes became jammed, forcing the submarine down at a steep angle from which it was unable to recover. The sub plunged down until it reached about one thousand feet, where it imploded, instantly killing the crew and blowing one hatch open.

When the sub impacted the bottom, fifty-two feet of the bow broke off; the remainder then slid two-thirds of a mile down on the side of an extinct volcano, coming to rest in a notch in the terrain.

Seventy men perished at this spot; the families now knew where it happened and why.

GRUNION'S BELL STILL TOLLS

To publicly recognize the sacrifices made by the *Grunion* crew, a memorial was planned for October 11, 2008, at the USS *Cod* Submarine Memorial in Cleveland. *Cod* is a sister ship to *Grunion*. The "Sub Ladies," as Ray, Bentz, and Rodgers had become known, invited all of the crewmembers' next of kin to the ceremony. About half of the seventy crewmen were represented at the memorial by a relative, all located through the Sub Ladies' efforts.

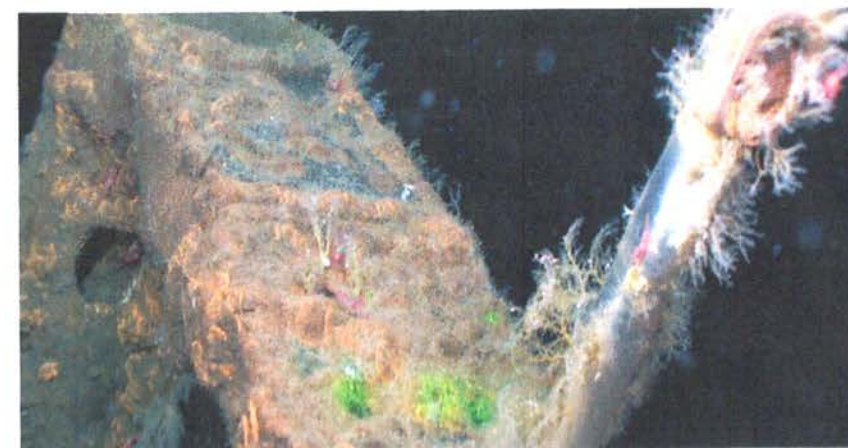
For the memorial, it is traditional to remember the fifty-two lost US submarines in a ceremony called the "tolling of the boat." A bell is struck once as each submarine's name is read. It is a very solemn ceremony, and although *Cod* (SS-224) has its own bell, many thought it would be fitting if members of *Grunion* could be present at the ceremony.

As it turns out, one of *Grunion*'s crew was from Greenville, Mississippi. Stan Kendrick and his wife, Geraldine, sister to Seaman 2nd Class Edward Knowles, had sent Bruce Abele a photo of the sub's bell on display in the town's visitors center.

Before leaving Pearl Harbor for combat in the Aleutians, the crew of *Grunion* removed anything from the boat that might make noise or come loose under water and put those items into storage. The bell was an obvious choice.



The glass faces of *Grunion*'s range finder, located on the conning tower, were blown off by the water pressure. Courtesy of the Abele family



Close-up of the periscope, which, like the range finder, has been blown out by the water pressure. The periscope may have been damaged or distorted when the circularly running torpedo struck the periscope shears. Courtesy of the Abele family

"During the Korean War, a Navy chaplain named Noonan was stationed in Pearl Harbor, saw the bell that had been removed from the ship in 1942, and asked if he could have it to take back to Mississippi," Bruce said. "The Navy said no, yet a few months later, while Noonan was in the South Pacific, a hundred-pound package showed up at his base. Lo and behold, it was the bell. When he retired, Noonan moved back to Greenville, Mississippi. He was ninety-eight when he passed away, and he willed the bell to the city, who placed it on display."

After obtaining permission from the US Navy, the Abele brothers were able to borrow *Grunion's* original bell and had it shipped and on hand for the ceremony.

There was another surprise forthcoming. Shortly after the memorial, Bruce was contacted by Takuya Asakura, a reporter who had done several excellent stories on *Grunion* for Japan's largest newspaper, *Asahi Shimbun*. Asakura had received a note from Kazuo Shinoda, the son of the commander of one of the sub chasers sunk by *Grunion*. His mother, Chiyo, ninety-eight at the time, said that just before her husband, Isamu, was killed, she received a note from him with flowers from Kiska, which she still had carefully preserved all these years. Seventy years later, the Abeles sent her pressed flowers from Kiska from the "Sons of Catherine E. Abele." It made the front page of several international papers.

An interesting aside to this story occurred in June 2014. Bruce received an email from Michael Mohl, an Israeli who runs the website NavSource. He had received a note from a Japanese farmer named Yobu saying that he had found a document indicating the



This distorted area of the hull is where the implosion occurred. Courtesy of the Abele family

SPECIFICATIONS USS GRUNION (SS-216)

Length	311 feet 9 inches
Beam	27 feet 3 inches
Draft	16 feet 10 inches
Displacement	1,525 tons surfaced; 2,415 tons submerged
Powerplant	4 General Motors 16-248 V-16 diesel engines 4 General Electric electric motors 2 126-cell Sargo batteries
Horsepower	5,400 shaft surfaced; 2,740 shaft submerged
Top speed	20.5 knots surfaced; 8.75 knots submerged
Crew	70
Armament	6 bow, 4 stern torpedo tubes 24 21-inch torpedoes 1 3-inch/50-caliber deck gun
Launched	December 22, 1941
Commissioned	April 11, 1942
Decommissioned	October 5, 1942
Builder	Electric Boat Co.
Class	Gato
Website	www.ussgrunion.com

location of the wreck of the sub *Escolar* (SS-294—lost October 17, 1944, with eighty-two crewmen on board). What was needed was a translation, and Bruce turned to Yutaka Iwasaki. That document ultimately provided a precise location for that sub in waters only about 450 feet deep and 50 or so miles from land. That is quite different from *Grunion's* three thousand foot depth and location 1,500 miles from the nearest civilization. Tony Duda, a relative of one of that crew, is now coordinating the project, looking for a way to confirm the location.

It is remarkable what collaboration can accomplish.



The first photos of the submarine were of its stern. Notice the rudder, diving planes, propellers, and (at the top of the photo) the propeller guards to prevent the sub from striking the tender or the dock. The laser pointer is focused on the diving planes, which are in the full-down position. Courtesy of the Abele family



The after battery room hatch was blown fully open when the submarine imploded. At first, many surmised that the crew had tried to escape the submarine, but upon closer inspection the hatch dogs were determined to have sheared off from the pressure. Courtesy of the Abele family

Grunion sailed from Hawaii to the Aleutian Islands on June 29, 1942, not to be seen for another sixty-five years. US Navy

I-400 CLASS

JAPAN'S PANAMA
CANAL KILLERS

JAPAN'S I-400-CLASS *SENSUIKAN-TOKU* (special attack, typically shortened to *Sentoku*), aircraft-carrying submarines, were a weapon ahead of their time, and one that could have had an impact on the war had they been deployed when the war's opening salvos were fired. In hindsight, these submarines' destructive capabilities could have been used in a number of catastrophic attack scenarios, such as dropping nuclear, chemical, biological weapons on American cities, but thankfully they were not.

Although there had been aircraft-carrying submarines prior to the *Sentoku* boats, *I-400*-class special attack subs were unlike anything ever seen before. Admiral Yamamoto ordered eighteen of the type in 1942. They were huge by any standard; they could hold enough fuel that they could cruise on the surface at fourteen knots, and had a range of 37,500 miles—one and a half times around the world. Each *Sentoku* submarine carried three Aichi M6A *Seiran* floatplanes, capable of delivering either one Type 91 aerial torpedo (fitted with a 518-pound warhead) or one 1,874-pound bomb.

The *Sentoku* submarines were approximately 400 feet long, with a beam of 31 feet and a draft of 23 feet. The subs displaced 5,700 tons submerged and carried a crew of twenty-one officers and 170 sailors. *I-400* class statistics show that each of these submarines was longer than the US Navy's most numerous destroyer type, the 376-foot-long *Fletcher* class, of which 175 were built, and they were 100 feet longer than the majority of American World War II fleet submarines. It would take the US Navy until August 19, 1958, to eclipse the length of the *Sentoku* submarines, when the radar picket boat *Triton* (SSRN-586) was launched.

The three *Seiran* aircraft (a name translating roughly to "Clear-Sky Storm") were carried in a centerline hangar, stowed with their wings folded and without landing gear. The centerline hangar required that the conning tower be offset; designers placed it to port of the centerline, making the conning tower more than thirty feet tall when measured from the submarine's deck.