



National Transportation Safety Board

Marine Accident Brief

Sinking of Tall Ship *Bounty*

Accident no.	DCA-13-LM-003
Vessel name	<i>Bounty</i>
Accident type	Sinking
Location	Heel-over and abandon-ship: About 110 nautical miles southeast of Cape Hatteras, North Carolina, 33° 57.36' N, 73° 54.52' W Vessel last sighted: 123 nautical miles southeast of Cape Hatteras 33° 49. 6' N, 73° 44.3' W
Date	October 29, 2012
Time	Heel-over and abandon-ship: 0426 eastern daylight time (coordinated universal time -4 hours) Last sighting: 1920 eastern daylight time
Injuries	3 serious 2 fatalities (1 deceased crewmember recovered; captain missing and presumed dead)
Damage	Total loss; value estimated as \$4 million
Environmental damage	Minor, due to remaining fuel on board
Weather	At 0426: Winds 50–60 knots with gusts of 90 knots; air temperature 73°F; overcast, visibility of 1–2 nautical miles; seas >20 feet; water temperature 78°F
Waterway characteristics	Atlantic Ocean

On October 29, 2012, the tall ship *Bounty* sank off Cape Hatteras, North Carolina, while attempting to transit through the forecasted path of Hurricane Sandy. Three of the 16 people on board were seriously injured, one crewmember died, and the captain was never found. The vessel's estimated value was \$4 million.



The *Bounty* under sail. (Photo provided by the US Coast Guard)

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Background

The *Bounty* was a replica of the original 18th Century British Admiralty vessel of the same name. MGM Studios built the vessel to be featured in the 1962 motion picture “Mutiny on the *Bounty*.” The vessel was larger than its namesake to accommodate filming equipment and personnel. After filming concluded, the *Bounty* traveled the world on a promotional tour for the movie. In 1965, the vessel arrived in St. Petersburg, Florida, where it spent most of the next 21 years, primarily as a dockside tourist attraction. In 1986, Turner Broadcasting bought the *Bounty* and in 1993 donated the vessel to the city of Fall River, Massachusetts, where it sat in disrepair until 2001, when the current management company, HMS *Bounty* Organization, LLC (or “vessel organization”), bought the vessel. The vessel organization consisted of the owner and a director of shoreside operations, and the *Bounty* was the only vessel that it operated. The vessel organization had listed the *Bounty* for sale in 2010 and was still trying to sell the vessel when it sank.

Over the *Bounty*’s 50 years, the vessel had been featured in several movies and undergone a number of renovations. For example, the oak planking below the waterline had been replaced in 2002. During a 2007 shipyard period, the planking above the waterline was replaced and a lead ballast shoe was added to the keel to improve stability (a ballast shoe is a strip of lead attached longitudinally to the bottom of the keel; it also protects the keel from damage).

According to the vessel organization, the *Bounty*’s mission was to preserve square-rigged sailing in conjunction with youth education and sail training. The vessel organization’s website stated that the volunteer crewmembers who served on board the vessel for voyages ranging from 1 day to a month or more did so with a desire for learning and adventure. The website also stated that the vessel organization worked closely with universities and non-profit organizations to provide leadership learning and youth-education-at-sea programs. In June 2012, about 3 months before the sinking, the vessel had sailed up the Chesapeake Bay to Baltimore, Maryland, to participate in the 200-year anniversary of the War of 1812 and the Star-Spangled Banner Celebration. The *Bounty* had also recently completed a trans-Atlantic crossing and had sailed the New England coastline.

The US Coast Guard certificated the *Bounty* as a “moored attraction vessel.” As such, when the vessel was secured alongside a berth, visitors could tour it for a fee, but the vessel was not permitted to carry passengers under way. Before granting permission for tours at any US port, local Coast Guard authorities would first inspect the vessel to ensure that it was fit to receive visitors. This included identifying and correcting possible safety hazards, and ensuring suitable means of embarking and disembarking, lifesaving and firefighting equipment, means of exit from below-deck spaces, proper lighting, and so on. When the *Bounty* transited between event sites with just the crew on board, the vessel was considered simply a recreational/private vessel, subject to very few requirements of the Coast Guard’s regulations found in 33 *Code of Federal Regulations* Parts 175 and 183.

As recently as 2012, the vessel organization had sought approval for the *Bounty* to carry passengers under way. The American Bureau of Shipping (a non-governmental organization that establishes and maintains standards for shipbuilding and operation) considered the vessel organization’s request and identified several modifications that would be required. Some of the modifications included addressing watertight bulkheads found with open penetrations, and

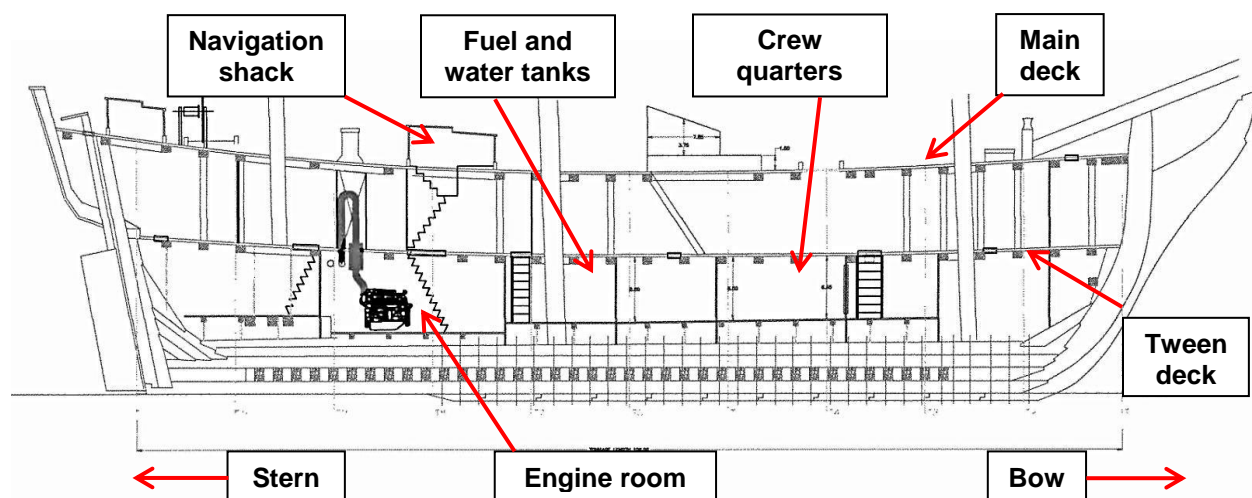
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fitting the fuel tank vent with a flame screen or a means of automatic closing. However, because of financial constraints, the vessel organization did not pursue the matter and the modifications were never made.

Shipyards Period

On September 17, 2012, the *Bounty* began a scheduled shipyard period in Boothbay Harbor, Maine, where the vessel had also undergone previous work. The 2012 shipyard period lasted for about 1 month, with the *Bounty* crew doing most of the maintenance and repair work. Shipyards workers, the *Bounty* crew, and the director of shoreside operations all testified at the Coast Guard's formal hearing of the sinking that the vessel's captain—who had worked on board the *Bounty* for 17 years—supervised all of the work, which included:

- Moving the crew quarters forward on the vessel, installing new fuel tanks, and repositioning water tanks;
- Installing a companionway from the tween deck (the below-deck) up and onto the weather deck (the main deck);
- Constructing new spars for the masts (the sails hang from the spars);
- Repositioning lead ballast (in the form of steel bars) from forward to aft to increase the vessel's trim by the stern; and
- Maintaining and repairing the hull (seaming and caulking, which involves driving fibrous material into the seams between the wooden boards to make the seams watertight).



Inboard profile of the *Bounty*. (Drawing provided by the HMS *Bounty* Organization)

During the shipyard period, the vessel organization hired a new employee, recommended by the chief mate, to work as the vessel's engineer. The *Bounty* was not required to have a licensed engineer, or engineer of any kind, on board. The crew testified that, usually, when no engineer was on board, whoever had the most experience would handle the duties in

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the engine room. The new employee joined the *Bounty* crew at the shipyard. While there, he conducted the majority of the plumbing work for the newly-positioned fuel and water tanks, and, to the extent possible while the vessel was drydocked, tried to familiarize himself with the engine room equipment. This employee had no professional maritime engineering experience but stated that he had worked with and maintained tractors, backhoes, and other machinery for more than 30 years.

Overall in terms of experience, ten of the *Bounty*'s crewmembers had worked less than 6 months on board the vessel. Nine of them had never worked on board any tall ship other than the *Bounty*. Only the captain and four crewmembers had more than 2 years' experience on board tall ships. Most of the crewmembers were also inexperienced in the technique of caulking and re-seaming a wooden hull. A couple of them had prior experience doing so, and they taught the newer crewmembers. Some of the shipyard workers later testified that they provided demonstrations and also assisted with a few challenging tasks. They also said that some of the crewmembers may not initially have "set the seams" hard enough and that the yard workers alerted the crewmembers to this. Overall, the shipyard workers stated that the caulking and re-seaming work was adequately performed. They did, however, question the seam compounds that the captain had supplied—NP1 (polyurethane sealant), DAP33 (glazing sealant), and DAP Kitchen and Bath (silicone sealant)—none of which was recommended for water immersion/marine environments.

During the shipyard period, several areas of the wooden hull were found to have rotted and the shipyard project manager documented them through photos and samples. The crew already knew about some of the rot, but other areas were also found and brought to the captain's attention. When the project manager asked the captain how the rot was to be addressed, the captain instructed his crew to apply paint to the rotted areas, and that because of time and money constraints, repairs had to wait until the next shipyard period a year later. During the postsinking hearing, the shipyard workers disagreed about the extent and severity of the rot and what role it may have played in compromising the vessel structurally. According to the project manager's testimony, the captain had told him that he informed the vessel owner of the rot and its extent (the vessel owner declined to testify at the postsinking hearing). The chief mate—who had reported back on board the *Bounty* at the end of the shipyard period and was the second-most experienced sailor after the captain—testified that he was not told about the rot until the postsinking investigation had begun.

The vessel organization had notified the Coast Guard of the *Bounty*'s 2012 shipyard period. Although not required, the Coast Guard did agree to examine the installation of the vessel's new fuel tanks (the tanks had been constructed at another location by a separate contractor). However, the Coast Guard did not examine the hull, because the *Bounty* had had a hull inspection in 2010 subject to the Coast Guard's Moored Attraction Vessel Policy, and therefore was not due for a hull inspection for another 3 years.

Formation of Hurricane Sandy

The *Bounty*'s next two scheduled events after the shipyard period were on Thursday, October 25 and Saturday, November 10. The first event, which the *Bounty* attended, was an "exchange of vessel tours" in New London and Groton, Connecticut, with US Navy personnel from the submarine USS *Mississippi*. Potential buyers also visited the *Bounty* while in New

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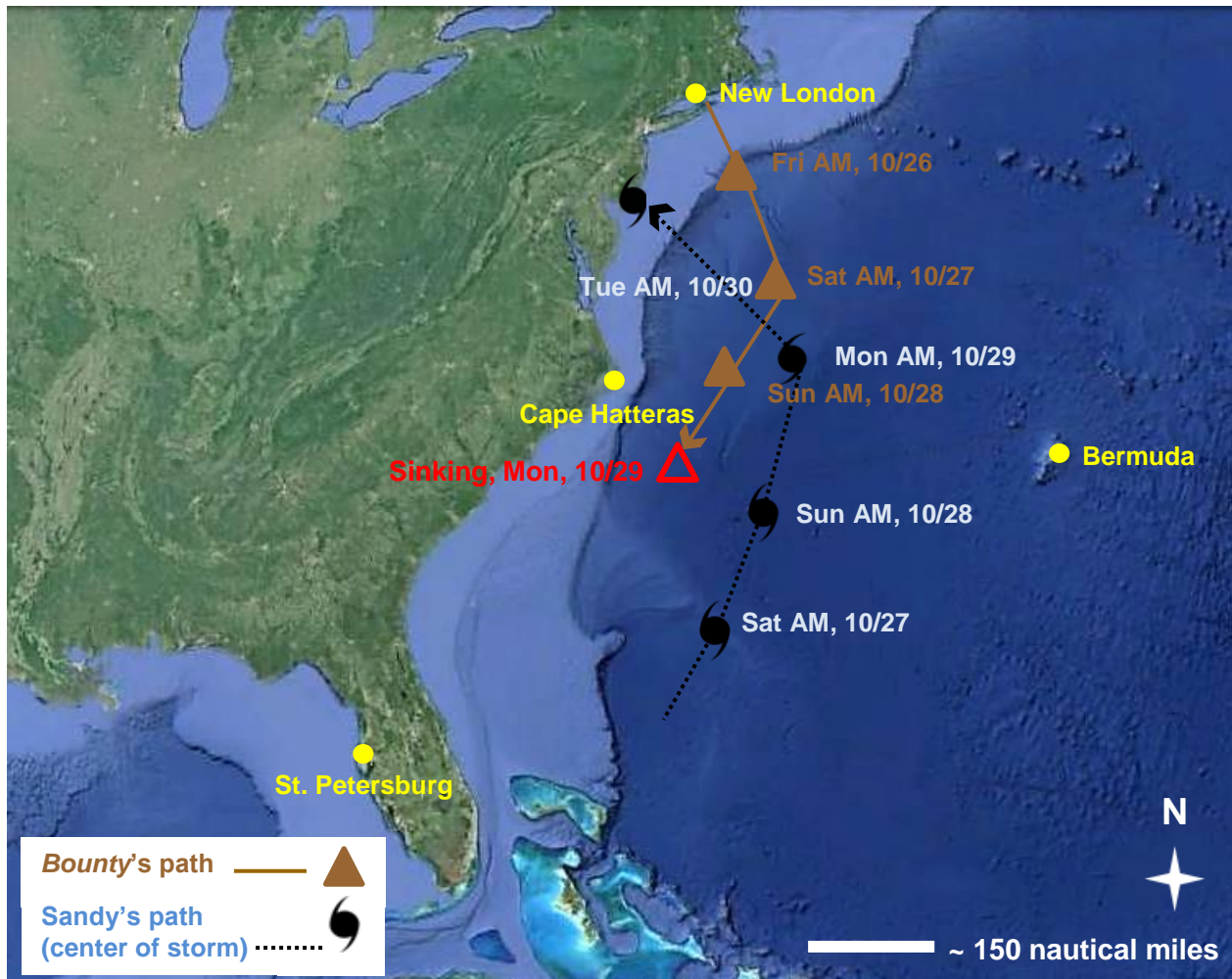
London. Later that same evening, the *Bounty* was to begin a transit along the US east coast to St. Petersburg, Florida, for the November 10 event. However, tropical weather system Sandy, which had been gaining strength in the Caribbean, reached hurricane strength on Wednesday, October 24, the day before the *Bounty* was to put to sea. Warnings were issued all along the US east coast, with major population centers taking unprecedented precautions. The majority of the weather forecast models agreed that the hurricane would stay offshore to as far north as Cape Hatteras, North Carolina, and would then turn west and make landfall anywhere between the Delmarva Peninsula to the south and New York Harbor to the north.

Making matters worse was that another weather system, a nor'easter, was later to develop off the US east coast. The nor'easter would combine with Hurricane Sandy and increase its intensity. Newscasters and weather authorities dubbed the powerful combination of hurricane and nor'easter "Superstorm Sandy."

Captain's Decision to Sail

Some of the *Bounty* crewmembers testified that, because of the hurricane, they were concerned that if the *Bounty* sailed for St. Petersburg as scheduled, the vessel and crew would be at risk. Therefore, about 1700 on October 25, after the Navy event concluded, the captain called the crewmembers to a meeting. According to crew testimony, he told them that his plan was still to sail the *Bounty* to St. Petersburg starting that same evening (departing in about 1 hour). He said that the vessel's exact course would depend on the hurricane's path as the storm moved north along the coast, but that his intention was to take the *Bounty* southeast, well out to sea, and let the hurricane pass southwest of the vessel. He spoke of his confidence in the *Bounty*'s ability to handle rough weather. In fact, just before the shipyard period, the captain had told a local Maine television station that the *Bounty* "chased hurricanes," and that by getting close to the eye, sailors could use hurricane winds to their advantage. The captain's view was that a ship is safer at sea rather than in port during a storm, but he told the crewmembers that if they felt uncomfortable with sailing as scheduled, they were free to leave and to rejoin the vessel later. He said that no one would think any less of them if they opted out of this transit, which was sure to encounter rough weather. The crewmembers would, however, have to pay for their own transportation to Florida if they did not travel on board the vessel. Moreover, they knew that the vessel already had limited crew—the usual complement was between 20 and 25—so if any of the current 15 left, the remaining crew would have an increased workload. The crewmembers testified that they admired and respected the captain, and that the camaraderie among the crew was substantial. Therefore, none of the crewmembers chose to leave. About an hour later, at 1800, the *Bounty* departed New London.

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Satellite image showing the approximate southbound path of the *Bounty* and the approximate northbound path of Hurricane Sandy. (Background by Google Earth)

The vessel organization was also aware of the storm; however, no written record, testimony, or other evidence indicates that the organization advised the captain not to sail as scheduled. After the sinking, the director of shoreside operations testified that day-to-day decisions on board the *Bounty* regarding the crew and/or how the vessel was operated and best maintained were solely at the captain's discretion. His authority included deciding when and how the vessel was to sail to its destinations. No evidence suggests that the captain was under any pressure to risk both vessel and crew to make the November 10 date in St. Petersburg, and the event could easily be postponed. Still, even if the *Bounty* had remained in New London until after the storm had come ashore, and departed on Wednesday, October 31, with an average speed of 6 knots (a routinely achievable speed for this vessel), the trip to St. Petersburg would have taken about 10 days. There was thus enough time in the schedule for the *Bounty* to have made it to the November 10 event, even with a delayed departure from New London. The crewmembers later testified that the captain was superstitious about departing on a Friday. This superstition likely influenced his decision to leave New London on Thursday evening immediately after the crew meeting.

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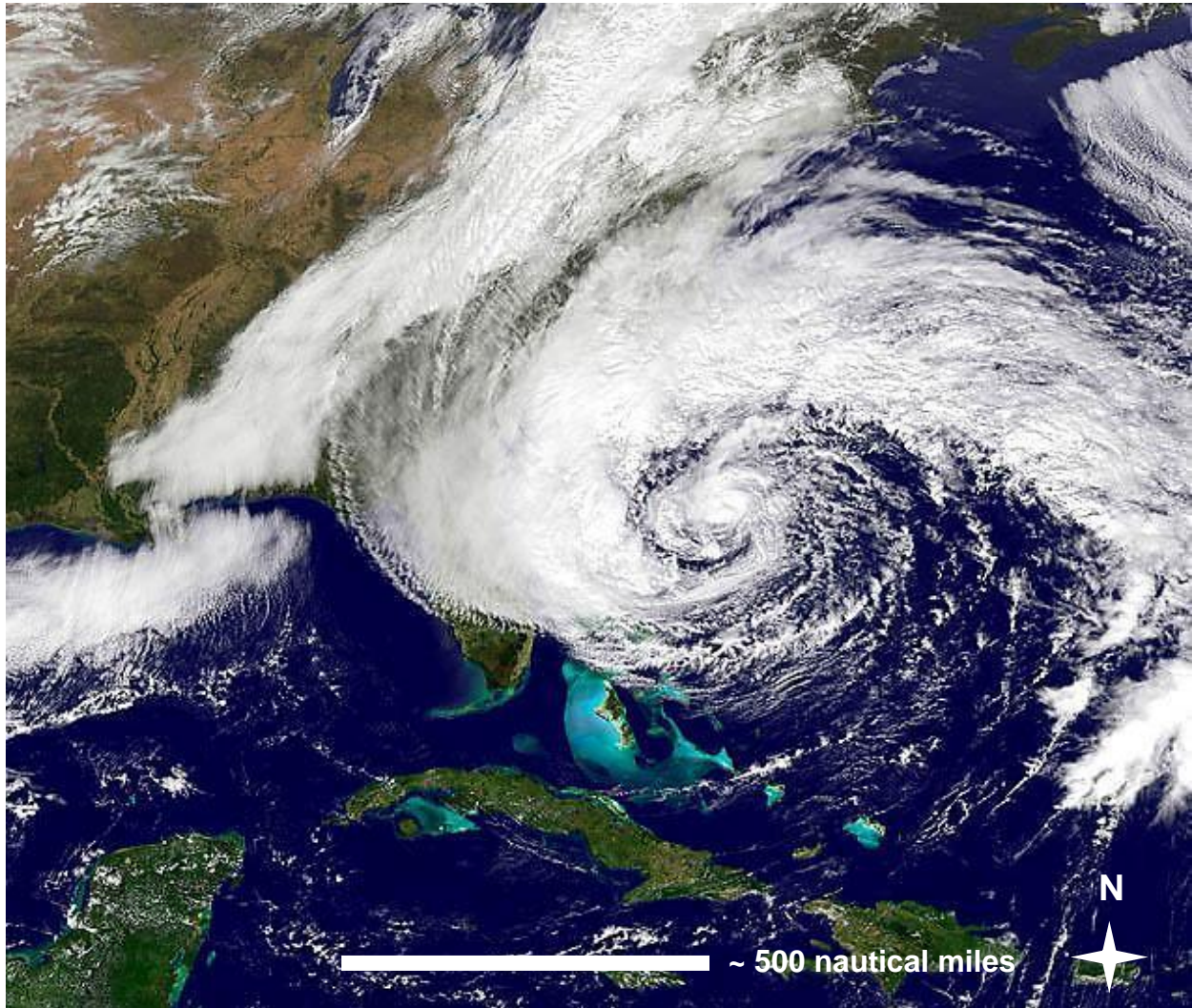
The crewmembers testified that during the first day and a half at sea, the *Bounty* made good way toward the southeast in fair weather and sea conditions, with no visible signs of the approaching storm. The crewmembers went about their watches and daily routine as normal, and also prepared for the storm (including rigging safety lines running fore and aft on the vessel to hold on to during rough weather).

Course-Change into Hurricane's Path

The captain, crew, and shoreside vessel organization were closely monitoring and communicating with each other about the weather forecasts. Late on October 26, the forecast models indicated that Hurricane Sandy would turn toward the west and, most likely, make landfall on the New Jersey coastline. This prediction should have confirmed to the captain that he could remain to the east and that any vessel movement back toward shore/to the west or southwest would at this point only increase the vessel's risk of encountering the storm. Also, turning the slow-moving *Bounty* to the west ahead of the storm would risk pinning the vessel between the hurricane and land.

Nonetheless, late Saturday morning, October 27, the captain changed course to the southwest to have the *Bounty* pass ahead of and to the west of Sandy. No crewmember testified being privy to why he did so. Some of them believed that taking the course to the southwest was the captain's intention all along. In an email to the director of shoreside operations the day before, the captain had stated, "Thanks for the [weather] update, because of it I feel okay about trying to sneak to the west of Sandy, new course 225 T. It looks like it will stay offshore enough [for] us to squeak by. Thx." It is possible that the captain may have focused too narrowly on the position of the storm's eye instead of on Sandy's total expanse (winds associated with the storm spanned more than 1,000 miles in diameter, and the area into which the *Bounty* was heading was already under tropical storm warnings, with conditions forecasted to worsen). Still, the captain seemed to believe that he could outrace the storm.

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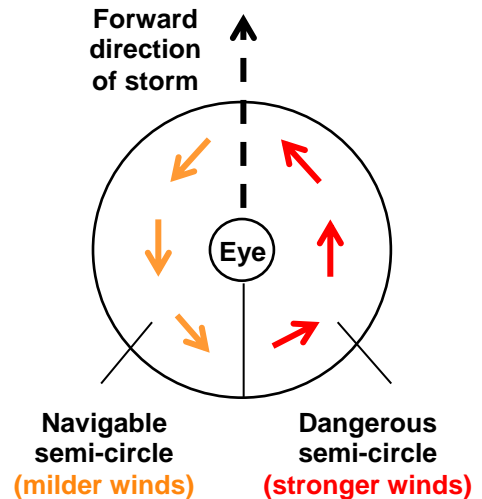


Satellite image of Hurricane Sandy on October 27, showing the large expanse of the storm. A National Weather Service advisory, issued at 1100 that day and sent in an email to the captain, stated that tropical storm-force winds extended up to 450 miles from the center of the storm and were already near the North Carolina coast.

By sailing the *Bounty* down the hurricane's west side (the "navigable semi-circle"; see next image), the captain hoped to take advantage of a following wind pushing the vessel southwest toward its Florida destination. What everyone, especially the captain and senior crew, seemingly failed to anticipate was the damaging effect that prolonged exposure to the storm would have on the wooden vessel.

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In the northern hemisphere, hurricanes rotate in a counter-clockwise direction, and the winds on the right side of the storm's travel direction are typically stronger. This is because the right side is subjected both to the circulation winds and the hurricane's travel speed. So, for example, if the winds are circulating at 100 knots and the hurricane is traveling north at 10 knots, the total wind force on the right/east side is 110 knots. On the hurricane's left/west side, the travel speed of 10 knots is subtracted from the circulating wind speed, and so the overall wind force there is 90 knots. Therefore, mariners sometimes refer to the left side of a hurricane's travel direction as the "navigable semi-circle." However, being near a hurricane on any side is dangerous as the winds are strong on all sides. In addition, hurricanes can be unpredictable, including spawning tornadoes.



The crew testified that even in the best conditions, the *Bounty* always “made water”—that is, water would gradually enter the bilge and had to be pumped, usually at least once during each 4-hour watch. As the weather conditions deteriorated on the 27th, the water in the bilge was filling more rapidly. The crew worked hard to sail the vessel through 8–15-foot seas and winds at 25–30 knots and increasing. The crewmembers described difficulty walking because of the motion of the vessel, and several of them felt seasick. The new engineer fell and fractured his right hand that morning. Also, he had been seasick even during the transit from the Maine shipyard to New London. His ability to attend to his duties was therefore greatly compromised, and he spent more time out of the engine room than in it.

As the *Bounty* continued toward the southwest, the vessel began to feel the effects of the Gulf Stream, a powerful ocean current with a strong northeast trajectory. Because of that, the *Bounty* may have encountered eddies, counter currents, and slower currents traveling with, but outside of, the main axis of the Gulf Stream. Any of these may have provided additional stress on the hull. Several crewmembers testified that they observed water entering the vessel in several areas, and that they heard “hissing sounds” as waves struck the outside of the hull, something they had not heard previously. Some of the crew spoke of leaks so persistent that plastic sheeting was affixed to the inside of the hull to keep the sleeping bunks closest to the hull dry.

Inability to Dewater Vessel

The *Bounty* had two main propulsion engines (John Deere, diesel, rated at 375 hp each), two generators that provided electrical power to the vessel (John Deere, rated at 35 kW each), two electric bilge pumps, and two hydraulic bilge pumps. The electric pumps were the primary means for de-watering the bilges, and were powered by the generators. The hydraulic pumps, one of which was fixed-system and the other portable, were the backup and could be used in case of emergencies or loss of generator power; the hydraulic pumps were powered by the starboard main engine. The crew had also purchased a gasoline-powered pump on a previous voyage but never used it nor practiced operating it. Several crewmembers testified that the electric pumps had not performed optimally after the *Bounty* left the Maine shipyard and during the stay in New London.

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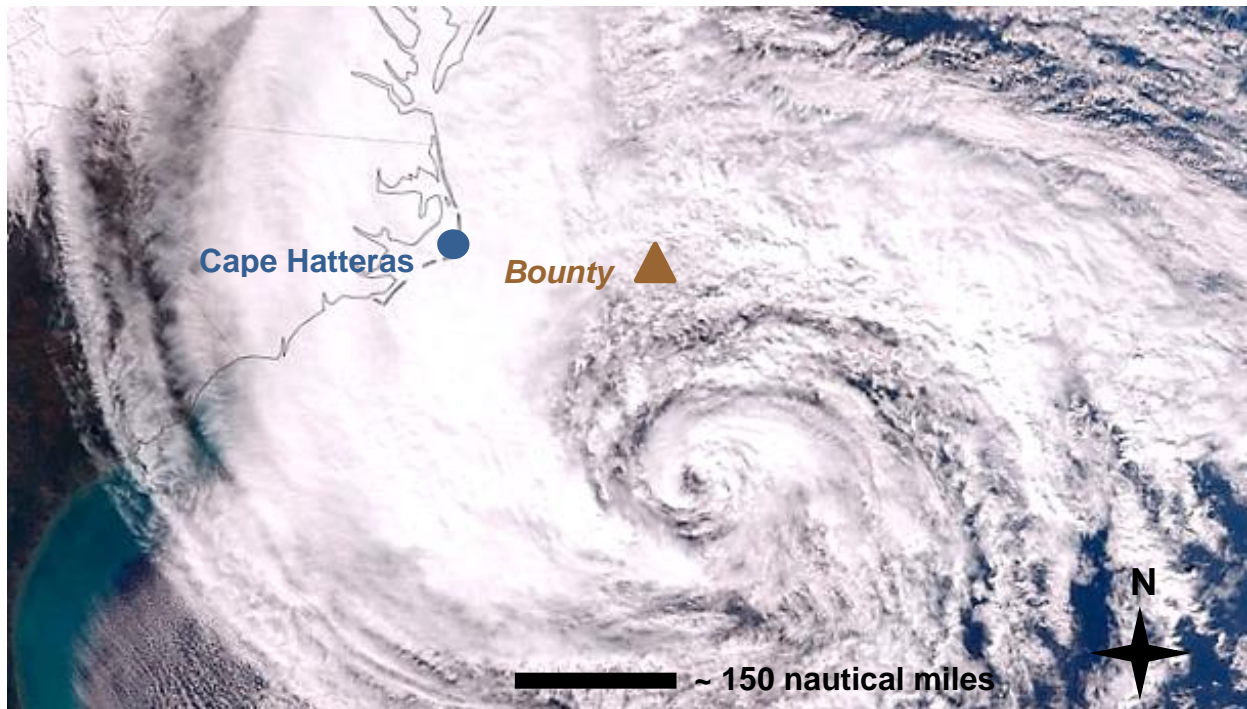
They said that they had told the captain and that he had been able to get the electric pumps working normally again, but no one was sure what he had done to accomplish that. Although putting to sea with an approaching hurricane, the captain gave no orders to test-run the backup hydraulic pumps or the new gasoline pump to ensure that they were operating properly and that the crew knew how to use them.

According to crew testimony, the captain would typically only use the vessel's main engines as auxiliary power when the wind was calm or when the *Bounty* was maneuvering in harbors and alongside docks; the rest of the time, he used only the sails for propulsion. However, by all accounts, the captain ran the engines hard out of New London to better position himself in relationship to the hurricane. As the vessel departed New London, both engines seemed to be working fine.

On Saturday afternoon, the port generator began to vibrate excessively as the vessel was buffeted by the mounting seas, and the electric bilge pumps had to be run constantly. By evening, the pumps were struggling and continually losing suction. The boatswain estimated that, at this time, the water level in the engine room bilge was 2–3 feet. Crew testified that, later that evening, the captain and a deckhand tried to activate the hydraulic pumps to assist the electric pumps. The fixed hydraulic pump would not work and efforts were now concentrated on activating the portable hydraulic pump. Through the night and into the next day the struggling electric pumps and the portable hydraulic pump had to be run constantly. The engineer was still very seasick. He testified that, at best, he was spending only a few minutes at a time in the engine room.

On Sunday morning, October 28, the *Bounty* was about 200 nautical miles north of the center of the hurricane. The crew was struggling to keep the vessel steady in the onslaught of winds and seas, which were primarily out of the east and northeast. The engineer testified that he suffered another bad fall that morning. The crew stated that by midday, the *Bounty* was experiencing 30-foot seas and 90-knot winds. In the galley, so much water was ingressing that the cook had to cover equipment with plastic sheeting. At this point, many of the crewmembers were suffering not only from seasickness but from fatigue, because the motion of the vessel prevented them from sleeping and they also had to assist beyond their scheduled watches. Midday, while the engineer stopped the port generator to change fuel filters, he started the starboard generator and left the engine room. On returning a few minutes later, he discovered that the port main engine had stopped working. He noticed that the sight glass on the port day fuel tank was broken and this may have facilitated a release of fuel into the bilges. The fuel quickly mixed with the high level of water already there and caused a strong smell of diesel in the small engine room. No one could testify as to how the sight glass might have broken.

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Satellite image of Hurricane Sandy, midday on Sunday, October 28. Overlaid on the image is the approximate position of the *Bounty* at that time.

Along with the starboard main engine providing propulsion, the *Bounty* was under sail, but one of its larger sails (the fore course) ripped in the early afternoon. Several crewmembers went aloft to furl the sail, in weather that at the time was described as 25–30-foot seas with winds gusting up to 90 knots. In the midafternoon, the captain was injured in a fall, and although he was still able to walk and work in the engine room, the crew testified that he was clearly in pain.

About 1600, the captain, the second mate, and a deckhand were in the engine room trying to restart the port main engine and keep the pumps working. Crew not on watch elsewhere assisted in the engine room trying to clear debris, change filters, and assist wherever they were needed. The second mate estimated there to be about 3 feet of water in the engine room. From this point on, the challenge to keep critical equipment running (main engines, generators, and pumps) and to decrease the amount of water entering the vessel was becoming insurmountable. The crew took the previously unused portable gasoline pump out of storage and tried to start it, but to no avail. The starboard generator was fluctuating and had to be taken offline several times during the evening to replace the fuel filters. Each time the generator was shut down the electric bilge pumps lost their power supply, causing the water to rise higher in the bilges.

Request for Coast Guard Assistance

About 1800 on Sunday, October 28, the *Bounty* was experiencing the fiercest effects of the hurricane, and the chief mate testified that he spoke to the captain about calling the Coast Guard. The captain did not see a need to contact the Coast Guard and decided to just concentrate on handling the vessel at that time. Another crewmember fell during the evening and

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became incapacitated by his injuries, later diagnosed as broken ribs, a separated shoulder, and a spinal injury.

When the water in the engine room reached about 4 feet, the captain contacted the vessel organization and requested Coast Guard assistance. At 2045, the organization notified Coast Guard Sector North Carolina about the *Bounty*'s situation. Shortly thereafter, the *Bounty* crew activated one of the vessel's emergency position indicating radio beacons (EPIRB) to identify the vessel and its location. About 90 minutes after the initial notification, the Coast Guard launched a C-130 aircraft to fly to the site in an effort to maintain radio contact overhead and assess the scene. At this time, the *Bounty* was about 150 nautical miles to the west and slightly north of the eye of Hurricane Sandy.

In an email to the vessel organization, the captain said "we are not in danger tonight, but if conditions don't improve on the boat we will be tomorrow," and, "the boat is doing great – we can't dewater."

About 2130, with the port generator still down, the *Bounty* lost electrical power when water from the bilges and the motion of the vessel shorted out the fluctuating starboard generator. According to the second mate, the only equipment running at this time was the starboard main engine and the portable hydraulic pump. After about an hour's attempt in waist-deep water, the second mate and a deckhand managed to restart the port generator, which also restarted the electric pumps. However, shortly thereafter, the engine room had to be abandoned because of the threat of electrocution from the high water level. As the water ingress continued, the port generator and starboard main engine finally failed about midnight on Monday, October 29. The *Bounty* was now adrift without any propulsion or dewatering ability.

The crew began gathering gear and planning for abandoning ship. The Coast Guard C-130 aircraft was overhead and in communication with the vessel. The *Bounty* crew informed the C-130 crew that the vessel was on battery power only and that the onboard water level had risen to 6 feet. About 2 hours later, at 0223, the *Bounty* crew relayed to the C-130 crew that the vessel was taking on 2 feet of water per hour and that there was 10 feet of water on board.

Coast Guard personnel continued to monitor the situation and communicate with the *Bounty* and the vessel organization. They discussed plans for Coast Guard helicopters to deliver pumps to the vessel. The launch of helicopters was scheduled for daybreak, as the conditions that night were beyond the helicopters' operational capability. Radio communication between the C-130 crew and the chief mate indicated a plan for the *Bounty* crew to abandon ship in daylight (at 0800).

About 0330, everyone on board gathered and donned immersion suits. One crewmember testified that, about this time, the captain asked "What went wrong? At what point did we lose control?" Crewmembers testified that, in addition to the immersion suits, they chose to wear lifejackets and climbing harnesses. The crew's thought behind these additional items was that the lifejacket would provide extra buoyancy, and the climbing harness—which had a rope lanyard with a clip and was normally used as a safety belt to go aloft—could keep survivors together by "clipping in" if they found themselves in the water and not in a liferaft.

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Vessel Heel-Over; Abandon-Ship

The chief mate testified that he twice recommended to the captain that they abandon ship while the vessel was still upright. The time was shortly after 0400, and the captain's plan was to remain on board the vessel until it was no longer safe to do so. The *Bounty* had two 25-person inflatable liferafts on board, and the crew was considering launching them. At 0426, after the *Bounty* heeled hard over to starboard and the bow was buried by a large wave, the captain and the crew had to quickly abandon ship. The chief mate notified the C-130 crew, and the *Bounty* crew entered the water in total darkness, about 110 nautical miles southeast of Cape Hatteras. The C-130 crew relayed the information to Sector North Carolina personnel, who ordered Jayhawk helicopters and an additional C-130 aircraft to get under way. The weather on scene was reported as west-northwest winds at 50–60 knots with gusts as high as 90 knots, and seas at more than 20 feet. Visibility was about 1–2 nautical miles, with intermittent rain showers.

The *Bounty*, lying partially on its starboard side, continued to rise up and down, bringing the rigging down onto the crewmembers who were trying to swim away from the foundering vessel. The supplies they had gathered were left on deck or carried away with the sudden heeling. Two crewmembers who had been “clipped in” to each other when they abandoned ship now found themselves caught in the rigging and were pulled under water as the pendulum motion of the vessel drove the spars down below the surface. Only when one crewmember was able to remove his immersion suit were they both able to free themselves from the entanglement.

The crew testified to a life-and-death struggle to swim away from the vessel in the stormy seas. Some of the crewmembers were able to hang on to and eventually climb into a liferaft that had automatically inflated after the heeling. Another group of crewmembers was able to hang on to a drifting liferaft, still canistered, and was eventually able to inflate it by pulling on the lanyard. All crewmembers—even those who had taken courses in basic safety training—testified to having difficulty boarding the liferafts from the open ocean while in wet immersion suits.

The first of the three Jayhawk helicopters that arrived on scene deployed a rescue swimmer and commenced hoisting operations at 0641. One crewmember was recovered from the water, 13 crewmembers were recovered from or near the two liferafts, and two remained missing (the captain and a female crewmember). Crewmembers testified that they saw the two of them on deck as the *Bounty* heeled over, but then lost sight of them in the confusion when everyone entered the water.

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The *Bounty*, photographed from a Coast Guard aircraft above, before the vessel sank.

The survivors were flown to the Coast Guard air station in Elizabeth City, North Carolina, for medical assessment. The search continued for the two missing persons. Hours later, at 1638, Coast Guard personnel recovered the woman in her immersion suit about 8 nautical miles southeast of where the *Bounty* had heeled over. She had no vital signs. The Coast Guard crew performed cardiopulmonary resuscitation (CPR) on her during the flight to the air station, and emergency medical technicians continued CPR while she was transported from the air station to a local hospital. However, the woman was pronounced dead at the hospital. After 2.5 days of searching for the captain, the Coast Guard suspended operations when the limits of the captain's survivability had been reached (calculations based on water temperature and the captain wearing an immersion suit).

The surviving 14 crewmembers suffered a variety of injuries, such as cuts, broken bones, separated joints, and bumps and bruises. The Coast Guard did not conduct drug and alcohol testing on the crew.

Last Vessel Sighting; Summary

The last confirmed sighting of the *Bounty* was at 1920 on October 29, 2012, when the crew of a Coast Guard cutter saw the vessel lying on its side, awash in the sea, about 13 nautical miles southeast of where the crew had abandoned ship more than 15 hours earlier. It was an end to a voyage that should not have been attempted. To set sail into an approaching hurricane introduced needless risk. Further, most of the crewmembers were inexperienced and their complement was smaller than usual. In addition, despite the fact that the *Bounty* took on water

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even in good conditions—and that wood rot had been discovered during the shipyard period—the captain gave no order to ensure that all onboard pumps were fully operational before departing, even though he knew that the vessel was sure to encounter rough seas during the voyage. This failure on his part further compromised the safety of everyone on board. Finally, the vessel organization did nothing to dissuade the captain from sailing.

Probable Cause

The National Transportation Safety Board determines that the probable cause of the sinking of tall ship *Bounty* was the captain's reckless decision to sail the vessel into the well-forecasted path of Hurricane Sandy, which subjected the aging vessel and the inexperienced crew to conditions from which the vessel could not recover. Contributing to the sinking was the lack of effective safety oversight by the vessel organization.

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Member

EARL F. WEENER
Member

Adopted: February 6, 2014

Sinking of Tall Ship *Bounty*

Vessel Particulars

Vessel	Tall Ship <i>Bounty</i>
Owner/operator	HMS Bounty Organization, LLC
Port of registry	Greenport, New York
Flag	United States
Type	Square-rigged, three-mast tall ship
Year built, place	1960, Lunenburg, Nova Scotia
Official number (US)	960956
Construction, builder	Wood, Smith & Rhuland Shipyard
Length	108.4 ft (33 m); 120 ft sparred length
Breadth	31.5 ft (9.5 m)
Draft	13 ft (3.9 m)
Gross US tonnage	266
Propulsion	Auxiliary sail, twin diesel twin screw
Persons on board	16

For more details about this accident, visit www.nts.gov/investigations/dms.html and search for NTSB accident ID DCA13LM003.

The NTSB has authority to investigate and establish the probable cause of any major marine casualty or any marine casualty involving both public and nonpublic vessels under 49 United States Code 1131. This report is based on factual information gathered during the formal hearing conducted by the US Coast Guard, in which the NTSB participated.
