The Discovery and Identification of the Bark *Cortland*

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The bark *Cortland* sank in Lake Erie on 21 June 1868 in a collision with the passenger steamer *Morning Star* off Avon Point, Ohio. Historical research determined a search area for *Cortland* and a sidescan sonar survey was conducted. On 30 July 2005, a wreck was found. A reconnaissance archaeological survey was conducted and the site was documented. Archaeological, historical, and circumstantial evidence was used to establish the wreck’s identity as *Cortland*.

**Introduction**

Just after midnight on 21 June 1868, the passenger steamer *Morning Star* collided with the bark *Cortland* north of Avon Point, Ohio, with a great loss of life (*The Plain Dealer* 1868a:3). This tragic accident was the focus of the Detroit and Cleveland newspapers for more than two months. Reporters interviewed the survivors and informed the public of lost passengers and crew, search and salvage operations, and bodies and debris that washed ashore. Although in 1868 the locations of *Cortland* and *Morning Star* were well known, their positions were never historically documented or designated on nautical charts, as the wrecks posed no hazard to navigation.

Interest in the accident was rekindled when the wreckage of *Morning Star* was rediscovered in the early 1980s. *Cortland* was reported to rest 3/4 mi. (1.2 km) southwest of *Morning Star*, which should have made it easy to determine its location (*The Plain Dealer* 1868b:3). However, historical research revealed that there were several contemporary attempts to salvage and move *Morning Star* to Detroit for repairs. The company that was engaged in the salvage “only succeeded in moving the hull about 12 mi. [19 km] from the spot where she sank” (*Cleveland Daily Herald* 1869:3). Since *Morning Star* had been moved, the key reference for locating *Cortland* was lost.

After the discovery of *Morning Star*, *Cortland* became one of the most sought-after shipwrecks in Lake Erie because of its role in the accident. Shortly after the formation of the Cleveland Underwater Explorers (CLUE) in 2001, the organization determined that *Cortland* would be an excellent shipwreck research project. The aims of the *Cortland* project were:

- to discover the location of *Cortland*;
- to perform a reconnaissance survey using sidescan sonar, video, and still photography;
- to identify the wreck; and
- to assess the condition of the wreck and the surrounding site.

To accomplish these objectives, historical research was conducted regarding the vessel’s history and construction. This information was used to determine an initial search area for a sidescan sonar search. One target was discovered in the search area and a sidescan sonar survey was performed to determine the layout of the site and to plan the reconnaissance survey. Divers conducted a reconnaissance survey, using still and video photography to record the condition of the wreck site. During the survey dives, the ship’s bell was discovered. The bell was later raised and conserved at the Great Lakes Historical Society (GLHS) in Vermilion, Ohio. Further archaeological investigation of the site is not feasible at this time due to the...
considerable sum in 1867 (Milwaukee Sentinel 1867:3). The captain and master of the vessel, James W. Louden, supervised its construction, from the laying of the keel to the rigging of the sails (Milwaukee Sentinel 1867:3). Louden, an experienced seaman, had been in Lyman’s employ for seven years.

The Career of the Cortland

Master builder Albert G. Huntley of Sheboygan, Wisconsin, constructed the clipper-style bark Cortland in 1867 (Sholes 1867:1). Cortland was built at the request of Asahel P. Lyman, a respected Sheboygan businessman (Sholes 1867:1). It was the largest sailing vessel ever built in Sheboygan and became the pride of Lyman’s fleet (The Sheboygan Press 1930:3). Lyman spared no expense in its construction, which cost approximately $50,000, a considerable sum in 1867 (Milwaukee Sentinel 1867:3). The captain and master of the vessel, James W. Louden, supervised its construction, from the laying of the keel to the rigging of the sails (Milwaukee Sentinel 1867:3). Louden, an experienced seaman, had been in Lyman’s employ for seven years.

Cortland’s certificate of enrollment lists the vessel as 173.6 ft. (52.9 m) in length, 34.4 ft. (10.5 m) in breadth, and 13.8 ft. (4.2 m) in depth (Sholes 1867:1). Its cargo capacity is recorded as 636.99 tons below deck and 39.14 tons on deck, for a total cargo carrying capacity of 676.13 tons (Sholes 1867:1). This made it one of the largest vessels ever built on the Great Lakes during this period (The Sheboygan Press 1930:3). It was constructed with a classic clipper square stern and adorned with
a scroll head (Sholes 1867:1). It had one deck and three masts. Its official enrollment number was 15, and Cortland’s certificate was signed by Christopher L. Sholes, Collector of Customs at Milwaukee, on 21 August 1867 (Sholes 1867:1).

When the newly christened Cortland arrived in the port of Milwaukee, its large size and graceful lines caused quite a stir. The Milwaukee Sentinel (1867:3) reported, “A large number of our citizens visited the Cortland yesterday and all united in pronouncing her one of the most complete vessels ever built on the lakes.” The newspaper further described the details of Cortland’s construction (Milwaukee Sentinel 1867:3):

Her hull is of the greatest possible strength, the frames being 12 x 15 at the bottom, 12 x 8 at the top, and 22 inches from center to center; stanchions 8 inches square; outside plank 4 inches thick; garboard strakes respectively 8, 7 and 6 inches thick, scarfed and keyed; the planking is square fastened, with two bolts and two spikes in each frame, and the drilling, besides, is edge bolted throughout. Her main keelson is 18 x 40, after keelsons 10 x 22, pocket pieces 18 x 36. There are two center boards, one 24 and the other 22 feet, made of 12, 10 and 8 inch plank. She has five breast-hooks forward, secured with beams, which in turn are kneed off thoroughly; three similar hooks aft add greatly to the strength of the stern. Her deck frames are kneed off and nailed in a manner similar to those of the Homer, while two lines of beam supporters extend the entire length of the vessel, just outside the combings of the hatches. The windlass pits, tow posts and snubbing posts are extra heavy and kneed off, and the shifting boards in the hold are set in between stan-

Lyman must have been proud of the Cortland because he commissioned a photograph of the vessel (Figure 1), which was unusual at this time due to the high cost. The photograph confirms the description of the vessel given in its enrollment certificate and in the newspaper account.

The Collision

On the morning of 21 June 1868, Cortland, under the command of Captain Louden, was downbound from Sheboygan (Cleveland Leader 1868a:4). It carried a crew of 11, a single passenger, and a cargo of 891 tons of iron ore (Cleveland Leader 1868a:4; McDonald 1958:311-313). The ore had been loaded in Escanaba, Michigan, and was destined for the steel mills of Cleveland (Cleveland Leader 1868a:4).

Earlier that evening the steamer Morning Star, under the command of Captain E. R. Viger, left Cleveland at 10:30 p.m. on its usual passenger run from Cleveland through the Pelee Passage to Detroit (Cleveland Leader 1868b:4). Its departure time was unusually late due to last minute lading of freight. Morning Star carried a crew of 38, cabin passengers, and emigrants along with a cargo of 80 tons of iron and a small quantity of miscellaneous freight (Cleveland Daily Herald 1868a:4; Cleveland Leader 1868c:3). The Cleveland Leader (1868b:4) described the weather conditions that evening as dark and rainy with “a peculiar mist penetrating the air.”

Around midnight on 21 June 1868, Andrew Brown, on watch in the top-gallant forecastle of Cortland, saw the lights of an approaching steamer (McDonald 1958:311-313). He reported the sighting to the first mate, who went aft to retrieve some binoculars, returned, and confirmed that a large steamboat was approaching. Cortland’s position was approximately 26 nautical mi. (48 km) above Cleveland, on port tack and “bearing east by north
half north with the wind north by east, a fresh breeze” (Cleveland Leader 1868a:4). *Morning Star* was traveling on a northwest bearing at a speed between 10 and 12 mi. per hour (16 to 19 kph) (Cleveland Leader 1868b:4). At approximately 12:45 a.m. Captain Viger of *Morning Star* was on watch along with the second mate, a lookout, and the helmsman when they heard *Cortland’s* fog bell (Cleveland Daily Herald 1868b:3). Before Viger had time to issue stopping orders, *Morning Star* collided with *Cortland* near the mizzen rigging on her starboard side (McDonald 1958:311-313).

The force of the crash was enormous and was described by a reporter from *The Plain Dealer* (1868b:3):

… while Captain Viger was still on deck, two bells from a sail vessel were heard and before the engines of the *Morning Star* could be stopped she struck the bark *Cortland* with her full force. The bark was laden with iron ore, yet such was the force of the *Star* that she passed nearly through her. As the two vessels collided such was the force of collision that the two anchors of the *Star* were thrown from their position on the lower deck across the bark one of them passing completely over the vessel, holding her closely confined, brought her stern directly against the wheel house of the steamer. The force of the waves soon beat the wheel house and the wheel to pieces, rendering it completely useless.

The bow of *Morning Star* was ripped completely open, and it sank in approximately 15 minutes. *Cortland*, once free of *Morning Star’s* anchors, drifted away and sank in about an hour and a half (Cleveland Leader 1868a:4).

Due to the incomplete passenger manifest of *Morning Star*, the final death toll was never determined. It has been estimated that at least 30 people lost their lives. During this period, it was common to only record paying adult passengers, not children or emigrants. This practice, coupled with the fact that many of the bodies were never recovered, leaves the final toll in human lives unknown.

The cause of the accident between *Morning Star* and *Cortland* was later determined to be faulty navigational lighting on *Cortland*. About 20 minutes prior to the collision, the mate of *Cortland* had removed the green lantern from the mizzen rigging and took it inside to trim the wick as it was burning dimly (McDonald 1958:311-313). As he returned the lamp to the rigging, *Morning Star* struck that precise point, killing the mate on impact.

**Locating the Site**

After the rediscovery of *Morning Star*, the search for *Cortland* by numerous groups intensified. There have been several claims of its discovery, but none were ever substantiated. In 2003, CLUE began its attempt to locate *Cortland*. Based on archival research, a search area was determined, and in September 2003 a sidescan sonar search of a 2 mi.$^2$ (5 km$^2$) area was conducted with no results. Further searching was deferred due to other CLUE commitments, but resumed in 2005.

During the interim, Jim Paskert, CLUE’s Chief Researcher, established a new search area. On 30 July 2005, the author and Kevin Magee conducted a low frequency (330 kHz) sidescan sonar search of this location. Weather conditions were difficult, with waves reaching 3 to 5 ft. with numerous whitecaps. Because of the long run to reach the search area, the survey crew decided to make one north-south pass. Just before reaching the southern limit of the search area, a target was found.

Several more sidescan sonar passes were made over the target area to determine the exact coordinates and to obtain better images. These additional passes showed that the wreck was not intact, but broken into several pieces. The orientation of the wreck was north to south, with what appeared to be the bow lying toward the south. The site is located in Lake Erie approximately 26 nautical mi. (48 km)
west of Cleveland, near Avon Point in 70 ft. (21 m) of water.

Archaeological Investigation

Sidescan Sonar Survey

Lake conditions improved and on 31 July 2005 the author, Stephanie VanZandt, and Carrie Sowden, Archaeological Director of the Peachman Lake Erie Shipwreck Research Center (PLESRC), undertook a more detailed sidescan sonar survey of the suspected Cortland wreck site. An overall sidescan sonar survey of the area, covering 0.5 mi.² (1.3 km²), was performed to locate any associated debris surrounding the site. This survey provided negative results.

A second, higher resolution (800 kHz), sidescan sonar survey of the wreck site was then conducted. This survey confirmed that the shipwreck, as expected, was not intact, but was broken into three distinct sections (Figure 2). The three sections were tentatively identified as the bow, a piece of decking, and the stern. The midships section of the wreck was completely missing in the sidescan sonar imagery. The stern section appeared to be lying on its starboard side and was almost completely buried, leaving only a small portion of the port side exposed. The stern is square and several of the frames are visible. The object at the center of the wreck was not identifiable, but was thought to be part of the decking due to the 90° orientation of the timbers. The forward portion of the bow was more intact and a bowsprit was visible, indicating a sailing vessel.

Reconnaissance Diving Survey

The images obtained from the sidescan sonar surveys were used to plan the reconnaissance diving survey. The bow was deemed the most interesting feature, and was the first portion of the wreck to be surveyed using video for site documentation. The dive team, consisting of the author and Carrie Sowden, arrived at the bottom and saw the wreck for the first time. The bottom temperature was 55° F (13° C) and the visibility was approximately
The stern section of the wreck was investigated for the first time on 25 August 2005. The dive team consisted of the author and co-discoverer Kevin Magee. Visibility had improved to 8 ft. (2.5 m). The stern is almost completely buried in soft mud, and an infestation of zebra and/or quagga mussels covers most of this section. It lies on its starboard side at an angle of approximately 45°, with only a small portion of the transom and gunwales exposed. The stern is square, with a carved lip visible along the top of the transom. A wooden cleat and line chock is mounted in the corner of the transom. A portion of the cabin coaming is intact along the port side with some decking still present. Forward of the transom and the cabin coaming, the stern breaks into massive frames then disappears into the soft mud bottom. Approximately 50 ft. (15 m) south of the stern, a raft of decking was located. This consists of a central beam with about 10 planks attached at right angles. Again, video was used to document the remains.

The bow section was revisited under the improved visibility conditions, and several new features were discovered. Detailed inspection of the windlass revealed the ship’s bell, seemingly jammed between the top of the windlass and the forecastle deck. Further investigation of the bow led to the discovery of a scroll head ornament attached to the stem below the bowsprit (Figure 4).

Identification of the Wreck

Although no signboard or name was found on the wreck, physical and circumstantial evidence suggests that it is the bark *Cortland*. This identification is based on correlations between the archaeological data and the information obtained from the historical record.

The site location is consistent with the historical records. A search of historical shipwreck databases show no other ships of this type to have wrecked in this area. The wreck lies on its starboard side in a soft mud bottom. The salvage divers that recovered the rigging off of *Cortland* shortly after its loss reported that “…the bottom of the lake [is] covered with...
Another piece of circumstantial evidence is the bell, the last sound heard before the fateful collision. Andrew Brown, on watch on Cortland, recounted that “the steamer came up so close that I was frightened and I stepped back and rang the bell” (McDonald 1958:311-313). Since Brown was on watch on the forecastle deck and the bell mount was found on the pawl bit, he would have had to step back to ring it. Again, this is consistent with the historical record.

Any one of these similarities on its own would not confirm the identification of the vessel. However, as a whole, these similarities build a strong case that this is indeed the bark Cortland.

The Missing Midships Section

The missing midships section of the wreck poses an interesting puzzle. There are two possible explanations for its absence. The first possibility is that a second, undocumented salvage operation took place to recover Cortland’s cargo of iron ore. While possible, this seems several feet of soft mud, in which the vessel is imbedded, and it is thought to be almost an impossibility to ever raise her to the surface. She now lies nearly on her side with the mud nearly or quite over her bulwarks” (Cleveland Daily Herald 1868c:3).

Cortland’s official enrollment papers describe the vessel as having a square stern and a scroll head (Sholes 1867:1). Both these features were identified on the site. Newspaper accounts specify that Cortland had a capstan on the forward deck along with a pump (Milwaukee Sentinel 1867:3), which is consistent with the findings on the wreck and is unusual in Great Lakes ship construction. The wreck also has a slatted forecastle deck, which is typical in clipper style construction.

The discovery of a plank with four fastening holes is consistent with the construction technique described by the Milwaukee Sentinel (1867:3). The reporter stated that the planks were square cut and fastened with two spikes and two bolts to each frame.
have an ordinary cast iron farm bell? Further historical research concerning the owner of Cortland revealed that Lyman lived in the village of Cortland, New York, near Seneca Falls, before he immigrated to Sheboygan. It is quite possible that the name Cortland and the use of a cast iron farm bell reflect Lyman’s memories of the village. The bell may have been taken from his homestead in Cortland and hung on the boat as a reminder of those times.

Conclusions

The major goals of the Cortland project have been accomplished. The location of Cortland was discovered on 30 July 2005. The wreck was documented using sidescan sonar, video, and still photography. The identity of the wreck as Cortland was determined through comparison of the historical records with the archaeological data obtained during the reconnaissance survey. The wreck site is in a good state of preservation. The condition of the timbers is excellent and the past mussel infestation seems to have caused no damage to the wreck. At present, the wreck is in a moderately anoxic environment and is being slowly covered by sediment.

Recovery of the Bell

The bell was recovered on 22 August 2006 (Great Lakes Historical Society 2006). During the recovery dives, it was noted that the site may have become anoxic, as all of the zebra and/or quagga mussels that had previously covered the wreck appeared to be dead. A possible bacterial mat was observed on the mud bottom adjacent to the wreck.

Conservation of the bell was completed in 2008. Although the bell did not bear the ship’s name, it did yield some interesting diagnostic data. A typical ship’s bell is cast of brass or bronze. This bell was constructed of cast iron and is typical of bells used on farms or homesteads during this period. The bell is stamped with the size “4” and bears the maker’s mark of the Rumsey Company of Seneca Falls, New York.

Why would one of the most expensive ships constructed on the Great Lakes at the time have an ordinary cast iron farm bell?

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