The New York and the Josephine: Two Steamships of the Charles Morgan Line

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Introduction

During much of the 19th century, New Orleans, the "Oueen of the South," vied with northern cities such as Boston for the spot behind New York as the second busiest port in the United States. It can be argued that the Crescent City rode to this distinction on a cloud of steam since it was only after the introduction of the steamboat in Louisiana waters in 1811 that vessels could easily stem the current of the Mississippi to reach the city's wharves over 95 miles from the river's mouth. Prior to that, the major water route into the city followed shallow water passages through the Rigolets into Lake Pontchartrain and down Bayou St. John to the Mississippi River. With the introduction of the steam engine, vessels could travel directly from the Gulf of Mexico up the deep channel of the Mississippi to the very front door of the city, drastically reducing the time required by sail. In addition, freed of the vagaries of wind and tide, shipping agents could, for the first time, offer customers a regular and dependable schedule of departures and arrivals. This, in turn, encouraged the development of such things as tourism, the transshipment of fresh produce, and the expansion of settlement into frontier areas.

In an era of American history before it became the responsibility of government to undertake great transportation projects, these fell to private individuals whose energy, "can-do" attitude, forcefulness and, sometimes, ruthlessness came to symbolize the American spirit. Men such as Cornelius Vanderbilt and Jay Gould drove the American economy and decided America's economic future. Such a man also, was Charles Morgan, whose influence on the process of resource allocation and economic development can still be felt in the Gulf South over 100 years later.

Charles Morgan

One of the foremost figures in the development of the steamship trade along the Gulf Coast of the United States was not a Southerner at all, but a New York businessman, Charles Morgan (Figure 1). Morgan was born in

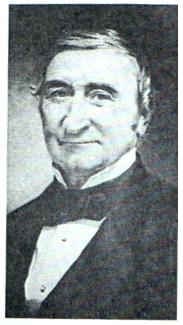


Figure 1 - Charles Morgan

Killingsworth, Connecticut, on April 21, 1795. At the tender age of 14, young Charles traveled to New York City to take a position as a grocery clerk. Opportunities abounded for ambitious young men in the bustling port of New York and by age 20 Morgan was proprietor of a ship chandlery and soon thereafter began importing goods from the southern United States and the West Indies.

Morgan developed interests in merchant shipping in the 1830s. During his career, he established the first regular steamship route between New York and Charleston, started the first steamship business in Texas (which brought the first steamship to the Gulf of Mexico), had ties to the Pacific merchant steamship trade, and also had interests in merchant shipping in Central America and Mexico (Dayton and Adams 1970:412-418).

Morgan's first venture as a shipping magnate began with the formation of the New York and Charleston Steam Packet Company, of which he was a partial owner. The company ran steamships between Charleston, South Carolina, and New York City. By the mid 1830s Morgan bought out the other partners and established the Southern Steam Packet Company. This company prospered under the direction of Morgan and acquired government contracts to transport U.S. troops and supplies to Florida during the Florida Indian Wars. Morgan's company also secured the weekly mail contract from New York to Charleston. By the late 1830s he expanded his interests to the Gulf coast (Pearson and Simmons 1995:57). Though Morgan lost about ten vessels in the process, he established the first regular steamship service in Texas in the late 1830s (Dayton and Adams 1970)

Among the regular cargo shipped on Morgan's Gulf coastline was the United States mail. Prior to the Civil War, he also ran mail service from New Orleans to Veracruz, Mexico. The Veracruz route originally began as part of the Mexican Ocean Mail Company, which was to provide mail service from New Orleans to San Francisco via Mexico. However, this venture never materialized (Baughman 1968:92). By 1855 Morgan's Southern Steamship Company established routes between New Orleans, Galveston, and Port Lavaca, and by 1860 Morgan was operating six regular routes in the Gulf (Baughman 1968:95-104).

In addition to his vast steamship interests, Morgan also developed a lucrative ironworks company. The Morgan Iron Works company, located in New York City, became one of the leading producers of marine steam engines in the United States in the mid-19th century. The company provided steam engines for many of the Atlantic coastal steamers. It also equipped most of the ships employed by Morgan, as well as many of the American-owned steamships operating in China. At its peak, the company employed over 1,000 men (Dayton and Adams 1970:384-386).

During the Civil War, the Morgan Iron Works supplied machinery for several Union naval vessels and also constructed the Union Monitor class ironclad *Onondaga*. After most of his Gulf coast ships were commandeered by the Confederate Navy, the Southern Steamship Company ceased operations in 1863 (Baughman 1968:120). A few of his remaining Gulf coast steamers, however, operated as blockade runners during the war. Always one to profit from opportunity, Morgan arranged for the construction of five new vessels at the Harlan and Hollingsworth facilities between 1862 and 1864. These ships operated as Federal charter vessels. After the Civil War, Morgan's interests returned to the Gulf of Mexico and within four years had surpassed his prewar holdings (Baughman 1968:131).

Morgan's greatest goal after the Civil War was to develop a unified system of steamship and rail lines that would connect the Gulf southwest with the Mississippi Valley, northern Latin America, and the Atlantic and Pacific coasts (Baughman 1968:208). Between 1877 and 1885, Morgan realized much of his dream. The initial step was taken by the newly elected Democratic legislature of 1877, which chartered Morgan's Louisiana and Texas Railroad and Steamship Company (M.L. & T.R. & S.), giving him the widest possible latitude to extend rail lines throughout Louisiana and Texas, to connect to existing lines, and to own and operate his ships.

Charles Morgan died at the age of 83 in 1878 at the zenith of his company's power and influence. The M.L. & T.R. & S. lived on briefly in the capable hands of Morgan's son-in-law and heir, Charles Whitney, until his death in 1882. Between the death of Charles Whitney and the railroad consolidation movement of the 1880s, the Morgan Line ceased to exist as a family enterprise by 1885. The mark that it left on the economic history of the Gulf South and on the United States was indelible. During the span of Morgan's lifetime, the public had come to take the existence of transportation for granted, and national and state governments undertook projects that had been left to private initiative. In other

words, the modern mixed economy evolved as a result of achievements of men such as Charles Morgan.

Remains of an Empire

Of the 117 steamships owned by Charles Morgan or his corporate enterprises between 1833 and 1885, the wrecks of three have been discovered in the Gulf of Mexico or contiguous waters. One of these, the Mary, was recorded by archaeologists off Aransas Pass, Texas, in 1995 (Pearson and Simmons 1995). The U.S. Department of the Interior's Minerals Management Service (MMS) has documented two others, the New *York* and the *Josephine*. Taken together, these two vessels represent the span of steamships employed by the Morgan Line and document the changing technology of steam navigation in the United States.

The *New York*: Construction and Employment

Built in 1837, the side-wheel steamer *New York* was among the first vessels of America's first coastal steam packet line, the New York and Charleston Steam Packet Company, which was run in partnership by James P. Allaire, John Haggerty, and Charles Morgan (Figure 2). That same year, with the fledgling

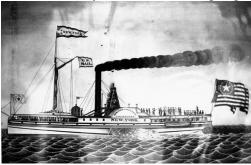


Figure 2 - The Steamship *New York*. Photo courtesy The Mariner's Museum, Newport News, Virginia.

company hardly off the ground, the partners faced their first major setback, the loss of their flagship, the Home, along with 99 passengers and crew. This tragedy and the ensuing public outcry forced a reorganization of the line with Allaire withdrawing from the partnership and leaving Morgan the managing partner of both the New York and the Columbia, another steamer. Partly because of the bad publicity resulting from the loss of the *Home*, Morgan became interested in establishing a regular trade route between New Orleans and Texas, which had only recently gained its independence from Mexico. Both Morgan and Haggerty had invested in sailing packets to New Orleans for years and Haggerty was already speculating in Texas lands. The financial opportunities were apparent to both and, with the Home disaster fresh in the public's mind, a change of scenery no doubt seemed desirable. With the arrival of Columbia in New Orleans on November 25, 1837, Morgan took the first step towards influencing the entire course of economic development along the Gulf coast.

The *New York* was placed on the Texas run in 1839 and exceeded *Columbia* in elegance. One female passenger likened herself to Cleopatra at rest on her fine stateroom couch and passed down a vivid description of the vessel's main cabin with its polished mahogany walls and white satin damask curtains. The windows of the salon were stained glass decorated with the arms of Texas. The dining table was set with engraved silver, crystal, and fine white porcelain decorated with a "blue device ... representing the *New York* at sea with the Texas eagle hovering over her"

(Hogan 1942:6). Steerage passengers were provided with curtained off berths for sleeping below decks and were allowed the freedom of the awninged decks during the day so long as they controlled their "loud discourse" and did not disturb the more affluent passengers in the main cabin (Baughman 1968:27). Unlike most of Morgan's later vessels, the 365-ton New York was woodenhulled. It was built in the yard of William H. Brown of New York and was equipped with a crosshead engine from the Allaire Works, owned by Morgan's former partner John P. Allaire (Heyl 1963:225). The registered dimensions of the vessel are 160'6" by 22'6" with a depth of hold of 10'6" (Vessel Registration No. 340, Port of New York).

During 1839 the New York and the *Columbia* made the regular passage between New Orleans and Galveston in competition with the *Neptune*, owned by another New York partnership. As a result of this rivalry, Morgan extended passenger and freight service to Velasco on Matagorda Bay, a settlement of about 1,000 people 80 miles south of Galveston. Morgan initially sent the New York to Matagorda, but repeated delays because of bad weather at the dangerous approach at Pass Cavallo caused him, by 1841, to offer only connections with smaller steamers to Matagorda.

During the rest of her career, the *New York* maintained a weekly schedule between New Orleans and Galveston except during periods of annual refits back in New York. During 1845 she advertised cabin passage as \$15, with only one night at sea (Baughman 1968:39). This was, no doubt, considered a blessing since, as one of the *New York*'s passengers recorded in 1841 of his fellow travelers, "some of them asserted, very positively, that if they once set foot upon shore, they would never be seen out of sight of it" (Baughman 1968:36). Most of the goods transported to Texas consisted of emigrants' effects, light merchandise, and provisions, with hides and cotton making the return trip.

The year 1846 was fateful, both for Morgan and the New York. Early in the year Morgan won a lucrative contract with the United States Post Office Department to transport mail to the newly annexed State of Texas for 75 percent of the postage. In addition, the outbreak of hostilities between the U.S. and Mexico on March 31, 1845, made New Orleans the major embarkation point for troops and supplies destined for Texas and Mexico and placed Morgan in an excellent position to obtain military contracts. The New York was chartered to transport troops to the U.S. army depot at Brazos St. Iago in south Texas on April 29, 1846, and completed several other military charters until her life ended in a hurricane on September 7.

The Loss of the *New York*, September 7, 1846

The *New York* left Galveston at 4:00 p.m. on the afternoon of September 5th with 30 passengers and a crew of 23 under the command of Capt. John D. Phillips (*The Daily Picayune*, September 10, 1846). Included among the passengers was Daniel J. Toler, formerly Postmaster General of the Republic of Texas (Baughman 1968:40). The ship had scarcely made 50 miles when she ran straight into the path of a hurricane. Unable to make any headway against the wind and heavy seas, Capt. Phillips ordered the *New York* to come to anchor to try to weather the storm. At 2 a.m. on the 7th, disaster struck when the wind, which had been blowing a gale from the northeast, hauled around to the southwest and hove her in the trough of the sea. The heavy seas carried away the caboose and sprang the planks, causing her to take on water. The crew struggled desperately, but unsuccessfully, to bring her head around into the wind. By 4 a.m., her smokestack was carried away and the heavy squall lifted off the stricken vessel's promenade deck, stove in her starboard guard and wheelhouse, and extinguished the boiler fires. As the wheelhouse was carried away, the bell of the ship gave one final toll, which, to the ship's clerk, "was the most solemn sound that ever fell upon my ear, I thought it the death knell to many, perhaps to all" (New Orleans Gazette, September 10, 1846). With the hull badly sprung and the upper works completely destroyed, the New York sank in 10 fathoms of water

Thirty-six people clung throughout the day to the remains of the promenade deck and other wreckage until another passing steamer, the *Galveston*, rescued them. Seventeen of her passengers and crew, including five children, drowned. Lost also was "thirty to forty thousand dollars in gold, silver, and bank notes" (*The Daily Picayune*, September 10, 1846). It was the promise of gold and silver that ultimately led to the discovery of the *New York*.

The Discovery of the New York

The 1846 article in the New Orleans Daily Picayune inspired a south Louisiana oilfield worker and amateur diver to launch a five-year search for the wreck of the New York in Federal waters 50 miles offshore. Working with nothing more sophisticated than a fishfinder and a Loran, he had one huge advantage that professional archaeologists often lack -- extensive family ties to the one group that has located more historic wrecks in the Gulf of Mexico than any other, commercial shrimpers. By systematically exploring the locations of net hangs recorded by shrimpers in their logbooks, a team finally located the wreck of the New York in 1990 in about 50 feet of water. With hopes of locating a lost safe full of gold and silver, a Louisiana salvage company was contracted to remove the sand from the hull. Fortunately, the wreck's discoverer had an appreciation of the historical importance of the wreck and resisted the recommendation of his salvage contractor to clamshell the site.

Excavation of the ship proved difficult because of the unconsolidated silt and sand bottom of the Gulf of Mexico. Ultimately, a large area of the hull was exposed, but almost no artifacts were recovered, no doubt due to the violence of the wreck event. What few items were recovered, however, helped to secure the date of the wreck: a mortising machine patented in 1836, an 1827 King George IV gold sovereign, and two 1843 U.S. half dollars.

In 1997, the discovery of the wreck of the *New York* came to the attention of archaeologists with the Minerals Management Service, the Federal agency tasked with overseeing oil and gas development in Federal waters on the Outer Continental Shelf. Still smarting from their abortive attempt at treasure hunting and interested more now in preserving the history of the Gulf, the wreck's discoverers willingly led the MMS to the site for an exploratory dive. They have subsequently proven to be an invaluable resource for providing information on the location of other wrecks in the Gulf of Mexico.

During the summers of 1997 and 1998, the scientific dive team of the MMS made a brief reconnaissance of the site of the *New York*. In addition to diving, the MMS conducted a magnetometer survey of the area to determine site size and limits in order to preserve the wreck from any possible disturbance from oil and gas activities. The MMS investigation was intended to confirm the identification of the vessel through analysis of its most prominent feature, a low-pressure, cross-head steam engine, and to assess the size of the wreck scatter (Figure 3). The steam engine was

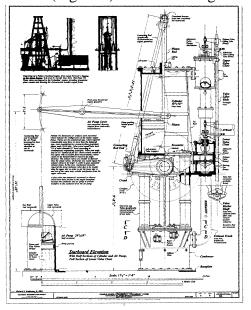


Figure 3 - Crosshead steam engine. After Irion and Anderson 1995: figure 3.

found to have toppled over on its starboard side. Identifiable parts of the machinery included the steam chest, the cam, the air pump, and condenser. The main piston cylinder had broken free from the condenser and was partly buried in the sand. All hull remains were buried and a paddle wheel shaft was observed by side-scan sonar some 1,500 feet (454 m) to the west. The engine observed on the seafloor is compatible with the type known to have been used to power the New York, a rare, early form of steam engine based on a designs of James Watt and first used commercially in the U.S. by Robert Fulton. Based on this assessment, the wreck may be confidently identified as the New York, a vessel clearly eligible for inclusion on the National Register of Historic Places.

The Josephine

A second Morgan wreck, located off the coast of Biloxi, Mississippi, came to the attention of the MMS as a result of a sonar survey performed by Klein and Associates nearly a decade ago. The location of this wreck was well known to locals as a fishing spot, although its identity had long been forgotten. When the MMS acquired a high-resolution sidescan in 1997 as part of its seafloor monitoring program, this wreck served as a convenient test site (Figure 4). The

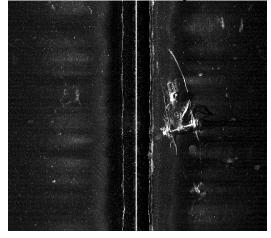


Figure 4 - Side-scan image of the Josephine.

MMS archaeologists running the survey, however, were astonished by the excellent state of preservation of what was clearly a sidewheel steamship with a walking beam engine. Subsequent research, which included the discovery that the wreck was labeled on a 1883 navigation chart, identified the vessel as the *Josephine*, an iron-hulled steamer built in 1867 for the Morgan Line (Figure 5).



Figure 5 - The *Josephine*. Photo courtesy the Mariner's Museum, Newport News, Virginia.

By 1867, Morgan's interests were once again well established along the Gulf coast, and in that year he contracted for Harlan and Hollingsworth to construct the *Josephine*. This ship was built specifically for Morgan's Louisiana and Texas Railroad and Steamship Company. Completed in early 1868, the *Josephine* first arrived at New Orleans on February 29, 1868, having departed from Wilmington, Delaware, on February 6. The vessel made stops in Havana, Cuba, and Key West, Florida, along the way.

Among the passengers on her maiden voyage were Charles Morgan and several members of his family. A contemporary account described the vessel as "... the most beautiful and elegant of any that have entered the port of Havana" (*Daily Picayune* 1868). The account continues by describing the vessel as having two cabins, an 800-horsepower engine, and being able to accommodate 250 passengers.

At the time of the *Josephine's* construction, Harlan and Hollingsworth had already earned a reputation for constructing quality iron-hull vessels (Hall 1884:204). The company first began building ships around 1844 and is credited with constructing two of the first iron-hull merchant ships in the United States, the *Ashland* and the *Ocean*. In 1883 they built the first steel-hull vessel, the *Olympian*. In 1906 the company became part of the Bethlehem Steel Corporation (Pearson and Simmons 1995:65).

From 1856 to 1860 Harlan and Hollingsworth constructed four steamships for Charles Morgan (Baughman 1968:107). Each of these ships included a single vertical walking beam engine and a compartmentalized hull (Figure 6). As a result of Morgan's

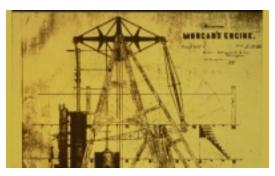


Figure 6 - Walking beam steam engine.

satisfaction with these vessels, Harlan and Hollingsworth eventually built 28 ships for the Morgan Line (Gause 1886).

Upon arrival in the Crescent City, the *Josephine* was assigned to run a new route from Brashear City, Louisiana, (later renamed Morgan City in honor of Charles Morgan) to Galveston, Texas. In addition to carrying passengers and freight, the *Josephine* also served as a mail carrier between these cities. According to newspaper advertisements, the *Josephine* ran this route twice a week, on Tuesdays and Saturdays.

At least three events recorded in local newspapers during the *Josephine*'s run between Louisiana and Texas are worth mentioning here. Shortly after beginning service along the Gulf coast in 1868, the steamer was almost lost when she ran aground at Brazos Bar, off the Texas coast. After about six weeks she was removed from the bar, taken back to New Orleans, and placed in dry dock at the Vallette Dry Dock facility. A copy of the marine surveyor's report, dated April 15, 1868, testified to the durability of this vessel:

> ... after having been so long ashore on the bar at Los Brazos de Santiago, and, as far as we can

discover, not a single rivet has been started, and not a single drop of water came out of any part of her bottom.

This grounding apparently had little effect on the steamer, other than allowing people the opportunity to see the underside of the vessel, as the account continues by saying:

> It is the intention of Mr. Morgan to allow his noble vessel to remain in the dock during to-day (Saturday), in order that those of our citizens who feel so inclined may have an opportunity of observing her out of water.

A contemporary photograph of the *Josephine* in dry dock may have been made to immortalize this occasion (Figure 7).



Figure 7 - The *Josephine* **in dry-dock.** Photo courtesy the Mariner's Museum, Newport News, Virginia.

In 1874 there was an account of the *Josephine* transporting the entire New Orleans Mechanic's Fire Company, No. 6, along with their steam engine, to Galveston and back, charged at standard excursion rates. This event is significant only because it is symbolic of yet

another major industry made possible by the regular and predictable schedules of the steam packets ... tourism. The following year, 1875, the *Josephine* functioned as a refuge vessel for the people of Corpus Christi, Texas, when Mexican bandits raided the town. This serves as a reminder that, even then, sightseeing was not without risk.

On January 15, 1881, the *Josephine* was transferred to the New Orleans to Havana route, replacing the steamer *Morgan*, another vessel built by Harlan and Hollingsworth of Wilmington, Delaware. This was to be her last excursion.

On January 27, the *Josephine* departed New Orleans and arrived in Havana several days later. She departed Havana with a cargo of tobacco and cigars (Irion 1989:8), as well as several passengers. Among the passengers was a family of musicians led by Professor Herman Franko.

According to a contemporary account of the foundering, the steamer began her return trip to New Orleans at 5 p.m. on February 2. She arrived in Key West the following afternoon and departed for Cedar Key that evening, arriving on the morning of Friday the fourth. At Cedar Key the *Josephine* picked up several more passengers. Included among the new passengers were 14 members of an Italian crew that had recently survived the sinking of their lumber ship, originally bound for London from Pensacola.

Josephine left Cedar Key around 4 p.m. Friday enroute to New Orleans, apparently sailing without incident until

sometime Sunday when it was noticed that the vessel was leaking. Passengers and crew worked to bail water but could not control the leak. Therefore, arrangements were made to abandon ship that evening. Prior to the Captain giving the order, however, the leak began to subside. Yet not long after this, the seas picked up and the vessel began to take on water once more. Monday evening, the Captain had the crew again prepare to abandon ship. By 3 a.m. Tuesday morning all had escaped, and the vessel began to heel to one side. Though all passengers and crew were able to escape the foundered vessel, the Franko family lost all of their band instruments. This included six trunks. six valises, two packages of costumes, and three violins, one of which he valued at \$1,000. Professor Franko estimated his total loss at \$15,000. Additionally, it was reported that the Captain's black dog was unable to make it off the vessel.

According to another account of the sinking, the *Josephine* ran into a hurricane sometime Saturday afternoon; it did not let up until Monday. "On Sunday morning it was discovered that the pressure of the water against the side of the ship opened the seams and the water was pouring in at a fearful rate" (*Daily Picayune*, February 10, 1881). This incident was reported as the first serious accident to a Morgan Line vessel in eleven years. The loss of the *Josephine* was valued at \$75,000.

Though it was described as a hurricane by one of the survivors, the time of the foundering was in early February, well after hurricane season ends on the Gulf Coast. Nevertheless, it must have been a very severe winter storm, for several accounts of storm damage were detailed in the February 10, 1881, edition of the New Orleans *Daily Picayune*. Included in the reports was an account that most of the buildings at Pass Manchac were destroyed. Damage was also incurred as far east as Pensacola, Florida.

Archival research on the *Josephine* has identified her registration number as 13806 (Lytle 1952:103). Recorded dimensions for the vessel are 235' length, 34' width, and 18.5' depth of hold, weight 1,283 tons. Advertised as a low-pressure steamship, she was powered by a 50-inch diameter engine with an 11-foot stroke. The Morgan Iron Works Company supplied the engine. *Josephine* had a round stern, two decks, and two masts. As mentioned previously, the ship included two cabins and could hold up to 250 passengers (Hall 1884:211; Gause 1886:382).

The Investigation of the Josephine

The wreck of the *Josephine* lies in about 38 feet of water between Horn Island and Ship Island, two barrier islands in the Chandeleur chain off Mississippi. The MMS diving investigation was limited to two days with the primary purpose of photodocumenting the site. The investigation also aimed to collect as much information as possible to confirm the identification of the vessel using non-invasive techniques.

At present, much of the iron hull of the wreck is buried. The upper hull above the waterline is gone. This observation is based on the position of the attachment points for the paddlewheels, which are still intact, and the iron spokes of the paddlewheels, some of which survived (Figure 8). The authors surmise



Figure 8 - Paddlewheel spokes. Photo by Greg Boland/MMS.

that the hull is intact from the keel to the waterline. The bow of the vessel is completely buried, but the line of the hull may be followed with only short interruptions to the vessel's rudder.

One of the most dramatic features of the wreck is the walking beam, the diamondshaped feature that connected the engine piston to the eccentric of the paddlewheels, which lies collapsed against the starboard side (Figure 9). Both paddlewheel shafts are still mounted in their pillow blocks (Figure 10). By measuring the paddlewheel



Figure 9 - The walking beam. Photo by Greg Boland/MMS.



Figure 10 - The paddlewheel. Photo by Greg Boland/MMS.

eccentrics MMS divers were able to derive the stroke of the engine: 11 feet, the same dimension published for the *Josephine's* engine. The engine cylinder itself does not appear to be extant, or it may have toppled and lies buried inside the hull. What appears to be a small piston cylinder just forward of the paddlewheels may be the engine's air pump, which drew water condensed from steam from the main piston cylinder and pumped it back to the boiler (Figure 11). The sidescan image



Figure 11 - Exposed portion of the boiler. Photo by Greg Boland/MMS.

collected the previous year when the interior of the hull was slightly more exposed shows two cylinders lying forward of the paddlewheels. These have been interpreted as twin boilers. Only the upper surfaces of these features were visible last summer. In between the two boilers is the large, baffled base of the smokestack (Figure 12).



Figure 12 - The base of the smokestack. Photo by Greg Boland/MMS.

Based on observations made by the MMS scientific dive team -- the iron hull, the stroke of the engine, the design of the walking beam that is identical to the 19th century photograph of the ship,

and the position of the wreck with respect to its position on an 1883 navigation chart -- the authors are confident in identifying the wreck, which has been assigned site number 22HR843, as Morgan's Josephine. This vessel is very well preserved, much more so than its contemporary the Mary in Corpus Christi, which also suffers from being located in waters that make data recovery extremely hazardous (Pearson and Simmons 1995:130). Pearson wrote of the Mary that she was "a ship that played a central and critical role in the economic history of the Gulf coast region (and) serves as a model for understanding the workings of a critical element of the nineteenth century Gulf coast trade and as a point of departure for studies of that trade" (Pearson and Simmons 1995:131). Not only are these words also true for the Josephine but because of its excellent state of preservation and the relatively benign environmental conditions at the site, its research potential is far higher.

References

- Baughman, James P. 1968. *Charles Morgan and the Development of Southern Transportation*. Vanderbilt University Press, Nashville.
- Dayton, Fred E. and John W. Adams. 1970. *Steamboat Days*. Frederick A. Stokes Company, New York.
- Gause, Harry T. 1886. Semi-Centennial Memoir of the Harlan & Hollingsworth Company. 1886. Privately printed, Wilmington, Delaware.

- Hall, Henry. 1884. "Report on the Shipbuilding Industry in the United States." The Miscellaneous Documents of the House of Representatives for the Second Session of the Forty-seventh Congress, Vol. 13, No. 42, part 8. Department of the Interior Census Office, Government Printing Office, Washington.
- Heyl, Erik. 1963. *Early American Steamers*. Buffalo.
- Hogan, William R. 1942. A Social and Economic History of the Republic of Texas. Ph.D. Dissertation, The University of Texas at Austin.
- Irion, Jack B. 1989. Underwater Archaeological Investigations, Ship Island Pass, Gulfport Harbor, Mississippi, Gulf Islands National Seashore. Submitted to the U.S. Army Corps of Engineers, Mobile District. GAI Consultants, Pittsburgh.
- Irion, Jack B. and Richard K. Anderson, Jr. 1995. Archaeological Investigations of the Steamboat *Columbus* (18ST625) in Chesapeake Bay, Maryland: Its History, Architecture, and Crosshead Steam Engine. Underwater Archaeology Proceedings from the Society for Historical Archaeology Conference. Paul Forsythe Johnston, ed.
- Lytle, William M. 1952. Merchant Steam Vessels of the United States, 1807-1868, "The Lytle List." Steamship Historical Society of America Publication No. 6, Mystic, Connecticut.

Pearson, Charles E. and Joe J. Simmons. 1995. Underwater Archaeology of the Wreck of the Steamship Mary (41NU252) and Assessment of Seven Anomalies, Corpus Christi Entrance Channel, Nueces County, Texas.
Prepared for U.S. Army Corps of Engineers, Galveston District.
Coastal Environments, Baton Rouge.