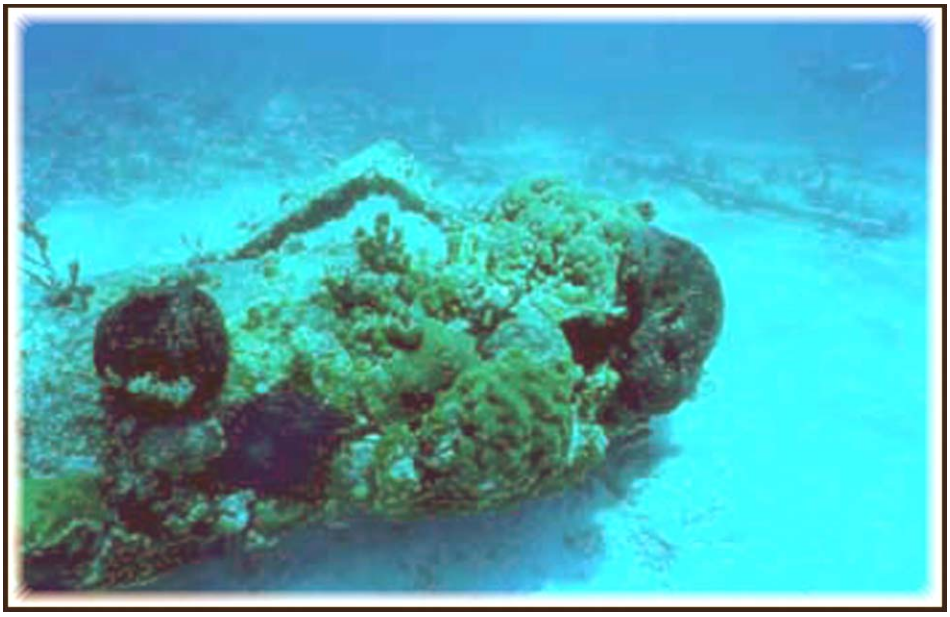
SLOBODNA SITE REPORT

UNDERWATER ARCHAEOLOGICAL INVESTIGATIONS OF THE "WINCH HOLE" AND "MAST WRECK" SITES TENTATIVELY IDENTIFIED AS THE *SLOBODNA* SHIPWRECK



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Abstract

On March 16, 1887, a schooner known as the *Slobodna* left New Orleans laden with 4500 bales of cotton. On its route the vessel experienced severe weather and as a result lost navigational control and was tossed ashore on the outermost part of the Molasses Reef system in Key Largo, Florida. The vessel pounded heavily upon the rocky substrate taking on water as it slowly broke apart. On March 17, all attempts to prevent the ship's sinking were abandoned and salvage operations began once the vessel bilged.

Since then this shipwreck and its remnants have lain lost and forgotten. The discovery of numerous artifacts and wreck sites many years ago has suggested the sinking site of the *Slobodna* has been found. The locations known as the "Winch Hole" and "Mast Wreck" sites have lain unidentified since their discovery decades ago by sport divers and underwater researches. Since the discovery and acknowledgement of these sites, several Indiana University underwater field schools have been conducted. As a result moorings lines, site plans, and diver slates have been developed for both sites, as the process of education and biological and historical monitoring continues.

Investigations indicate that the sites are historically and archaeologically significant, and provide much insight into maritime commercial history. The site supports an intact and thriving reef ecosystem. Because of the site's combined historical and biological significance and importance to surrounding reefs, it is recommended the site be afforded protection, and mooring and spar buoys be placed on both sites identifying both sites as the 1887 *Slobodna* shipwreck.

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Introduction

Within the Key Largo National Marine Sanctuary many investigative studies have been conducted in efforts to maintain on-going assessments and archaeological studies of significant sites as historical and cultural resources. Without these studies our interpretation of underwater sites that represent a past era of maritime commerce would be severely impaired. This research paper is a summary analysis of the many studies, field analysis, and reports of historical documents related to underwater sites known as the "Winch Hole" and "Mast Wreck" sites tentatively identified as the *Slobodna*. Numerous years of studies and field research in the Florida Keys have yielded a large number of data and documents that have aided in the completion and compilation of this report. These field studies have added to the insight and interpretation of Florida's cultural past, as well as educating divers and the public to the importance of non-renewable underwater resources. The Florida Keys have many underwater representations of the past, one such wreck being the 1887 *Slobodna* shipwreck.

The *Slobodna* was a nineteenth century Austrian-built wooden sailing schooner constructed in Lussinpiccolo, Hungary, in 1884. The vessel was 170 feet 6 inches long, 35 feet 4 inches wide, and was designed to be used as a commercial transport sailing ship with a capacity of 1199 tons. The vessel departed in late 1884 from the seaport of Herceg-Novi in the country of

Montenegro on her maiden voyage and within three years of service would fall victim to the ocean (Admiralty Records).

On March 16, 1887 the *Slobodna* set sail from the New Orleans seaport transporting cargo on an ill-fated trip that would last only days. On its way around the Florida Keys' coastline the ship experienced a sudden and severe storm that grounded the vessel on the outermost part of the Molasses Reef system in Key Largo, Florida. After several failed attempts to free the ship from the shallow reefs, another schooner known as the *City of Key West* moved alongside the *Slobodna* to render assistance. A chain was run out from the *Slobodna's* stern winch and anchored to prevent the vessel from grounding further. As result of this, heavy strain was put on the winch, weakening it structurally because of the high tides and rough weather (Admiralty Records).

The following day numerous workers engaged in the pumping, breaking out cargo, and shifting items within the hull of the ship once the schooner *Rapid* pulled along side the *Slobodna*, readying for the next high tide. That afternoon a heavy squall developed bringing about heavy seas, swinging the *Slobodna* broadside on the reef by the apparent breaking of the winch and dragging of the anchor. The rough weather caused much of the deck rigging to break and be tossed into the surrounding shallow waters and bilged the vessel with about 15 feet of water in its cargo hold causing it to pound heavily on the rocky substrate. The vessel then drifted about 3/4 of a mile over the next 30 day's until it came to

rest in about 25 feet of water (Admiralty Records).

Soon after the *Slobodna's* bilging, salvage workers began the arduous task of unloading its contents and placing them on salvage vessels. There were 335 men and 41 vessels engaged in the general salvage efforts that continued for 30 days. The operation was labor-intensive and extremely dangerous. The large bales of wet cotton that the *Slobodna* was transporting in its hold weighed into the tons, making recovery and transport extremely laborious. During the latter parts of the salvage efforts, much of the *Slobodna's* hull had become so crushed that most of the unrecoverable cotton was caught between deck beams that had collapsed. The workers were ill-prepared for such an occurrence, and diving activities lacked the necessary appliances for working underwater. All salvage recovery and hoisting had to be done by hand, and many workers had to free dive in order to retrieve the cotton. The hull was filled with a pulpy mass of loose cotton, making it extremely dangerous to dive through. As a result of the salvage efforts the vast majority of cargo was recovered and no lives were lost. What remains today are two underwater wreck sites that give testimony to what had occurred on that ill-fated day and historical documentation detailing of the *Slobodna's* demise (Admiralty Records).

Historical Evidence

Historical documentation such as the Key West Federal Admiralty Records contains information about the *Slobodna* wrecking event, general salvage efforts, and structural remains have been a significant source of historical information. These accounts have assisted with the archaeological investigations and historical accounts of what happen during its final days. These Records support numerous investigative premises that have been vital component in the process of identifying the initial grounding site and eventual wreck.

The Federal Admiralty Records state that the *Slobodna* was sighted ashore about 9:00 am on the morning of March 16th, 1887. It was first sighted by Libellant Baker on the Florida reef zone known as French Reef, also called the Molasses Reef zone. Several statements also suggest that the vessel lay upon the outer portions of the Molasses Reef system in 18 to 24 feet of water. The Admiralty Records further declare that the vessel was stranded on an outlying reef equidistant from the Pickles Reef beacon and the French Reef beacon, which is today the present location of Molasses Reef and very near the "Winch Hole" and "Mast Wreck" sites. Today these beacons no longer exist, but records and maps still show in detail the approximate location of the beacons around the time of the *Slobodna's* wrecking (Figure 1). There are also accounts of divers finding the remains of what could be the tubes at the base of the rocky substrate that once stood as the beacons (Figure 2). Statements also note that the vessel had a

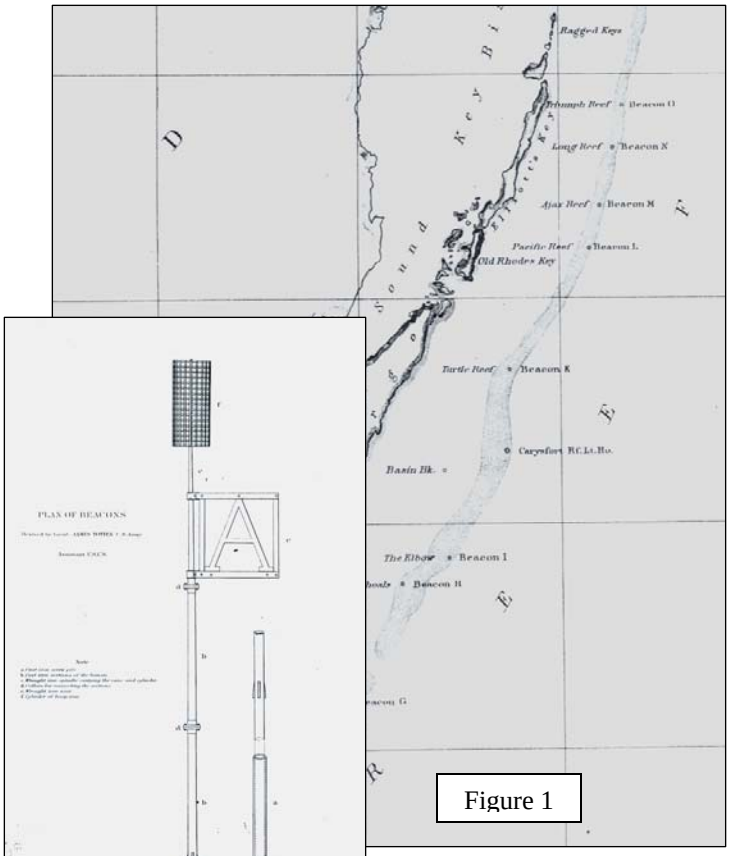


Figure 1

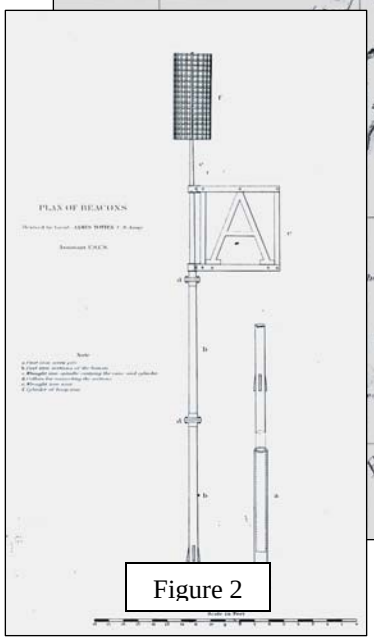


Figure 2

compass bearing to Rodriguez Key of North-West by West 3/4 of a mile and about 4/2 miles in distance. Tavernier Key also had a bearing of West by South, 1/8th of a mile south, and about 6 miles in distance. Once the ship had come to rest in its present-day location, and from the testimony of the wreckers in 1887, it was evident that the ship had not moved from the ocean floor since its sinking (Admiralty Records). As a result of these observations and bearings and the use of a present-day nautical map of the specific region in Key Largo, a generalized geographical map could be developed to show the proximity of the wreck by the use of these documented observations. Plotting the location of the Pickles and French Reef beacons in 1855 and drawing a line between them, as well as dividing the line in half, yields a location very close to both the "Mast Wreck" and "Winch Hole" sites. Next, by using this location as the generalized

site of the wreck, it is then possible to plot the angles and distances to the outlying islands mentioned in the records. Rodriguez and Tavernier Key bearings accurately match the ones given in the Federal Admiralty Records. This strong correlation suggests that the sites in question have an extremely high probability of being parts of the *Slobodna* (Figure 3).

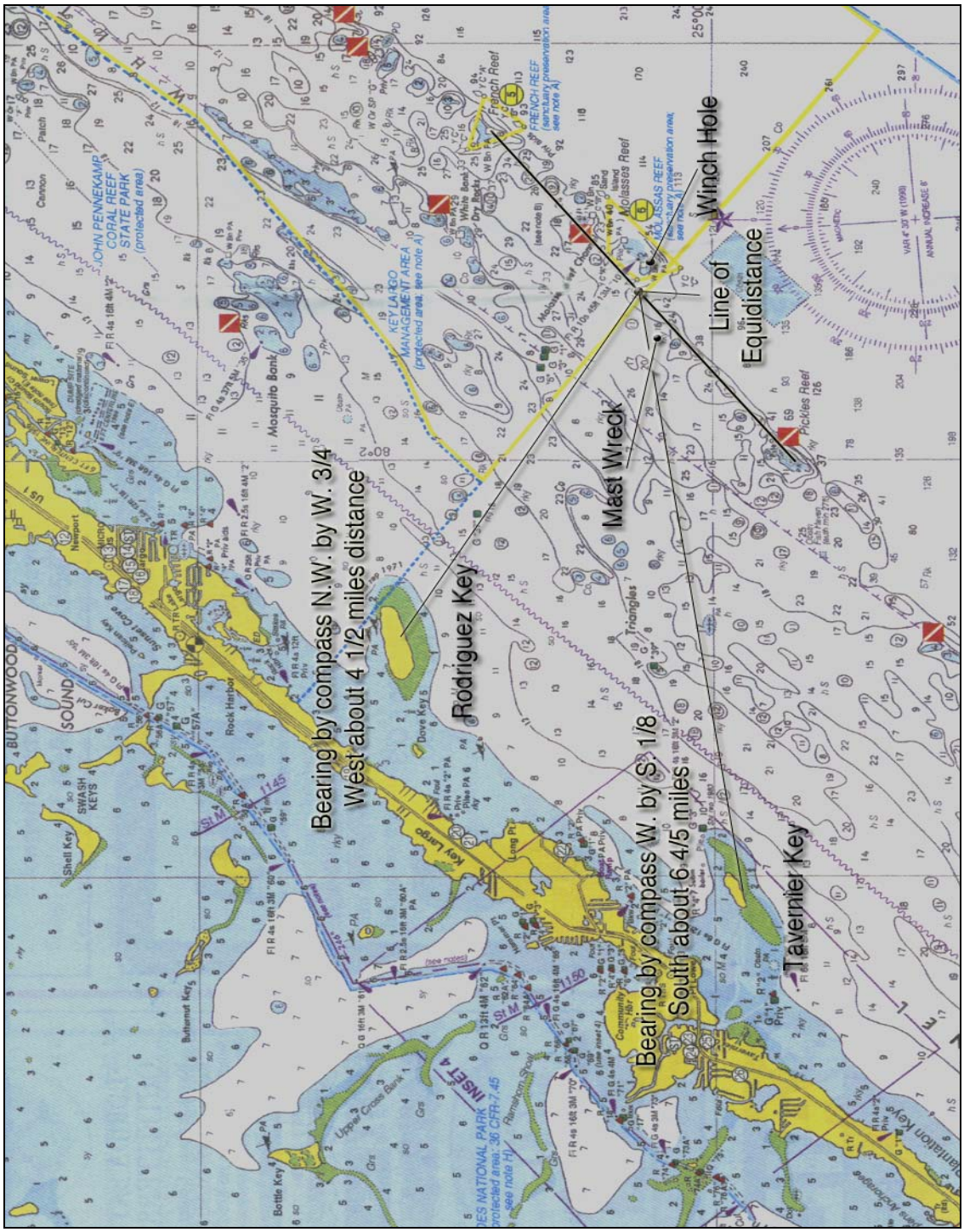

Bearing by compass N.W. by W. 3/4
West about 4 1/2 miles distance
Rodriguez Key
Mast Wreck
Line of
Equidistance
Winch Hole
Bearing by compass W. by S. 1/8
South about 6 4/5 miles
Tavernier Key

Figure 3

Wrecking Occurrence

In every shipwreck a process of events occurs that causes a ship to go from a complete intact structure to one that has become an indiscernible mass of artifacts. In the case of the *Slobodna* several events transpired before its final resting into the seabed. The wrecking of the vessel occurred in two very distinct phases. The first phase consisted of the vessel bilging; the process of which a ship undergoes a fracture in the bilge and taking on water to the moment it is level with the water line, followed by the wrecking process.

The *Slobodna* ran aground on a shallow reef system in the upper keys of Florida during a time of the year when weather can be very unpredictable and harsh. Reoccurring weather patterns have revealed that in the early months of spring, traversing such waters can be hazardous in the Florida Keys, and all indications suggest that such weather was a direct cause of the Slobodna's grounding and eventual wrecking.

Wrecking Process

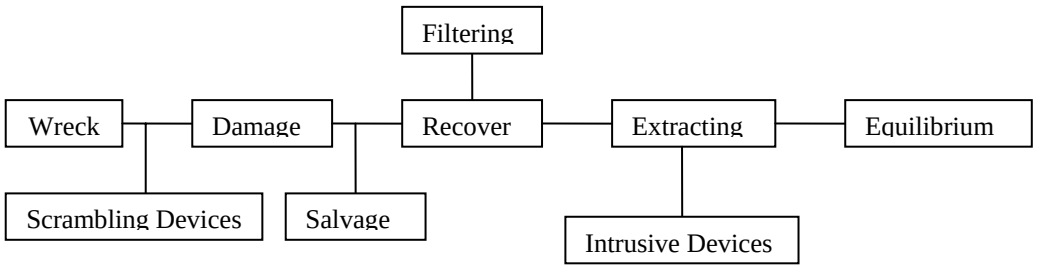


Figure 4

The illustration above (Figure 4) graphically represents the processes a ship goes through once it wrecks. Every wrecking event is different. The unique differences of each wrecking process represented by the physical archaeological evidence at a site enable one to formulate a hypothesis regarding the identity of the ship. A severe squall on the morning of March 16, 1887 threw the *Slobodna* briskly upon the shallow shoals and coral reef banks of the Florida Keys. When the *Slobodna* grounded waves pounded the ship violently on the reef, breaking the hull in several places, damage that caused the eventual sinking of the vessel. The hull filled with water as the ship was tossed about in the rough seas with ship's gear such as standing, running, and structural rigging cast into the waters. Shortly after the bilging, salvage and recovery commenced. Salvage vessels began removing components of the vessel's superstructure to avoid any unnecessary hazards and to ease the task of transferring material. During the salvage efforts many of the lower deck beams and topmast were cut away to allow for the removal of the cargo, as well as to enable vessels to move along side the Slobodna safely. The vessel's lower masts, bowsprit, and lower and topsail yards were left intact. Several structural articles were removed from the vessel by salvage workers. The steering gear was removed, leaving only the rudder intact and other numerous riggings that were taken away including the chain and pump hardware still on board (Admiralty Records). The vessel continued to sink for many days, and salvage efforts continued even after the vessel struck ground and listed to its

side. The wrecked vessel was then impacted by wind, wave, and current action, which enabled microscopic intruders such as bacteria to begin the long process of destroying the wooden components of the wreck, such as the hull.

The ship's hull eventually fell apart under the strain of its own weight. Artifacts such as wood and metal, once exposed to the oceanic elements, were buried by the continually shifting sand, which has preserved artifacts only seen from time to time. Artifacts made of iron and steel, which are still evident today at these sites, would have fared better than most of the other non-metal components of the vessel.

As the wreck stabilized and deterioration slowed, the process of equilibrium then began. Equilibrium is a stage at which a site becomes incorporated as part of the ecosystem and the vessel becomes relatively protected by sedimentation unless disturbed by modern activity (Beeker 1995).

Investigative Research

The office of Underwater Science has conducted underwater research activities in the Florida Keys for a number of years. Underwater Science has worked in partnership with both the State of Florida and the National Marine Sanctuary for many years, developing methods to preserve biologically and culturally significant sites in the Florida Keys National Marine Sanctuary. The "Winch Hole" and "Mast Wreck" are among the numerous culturally significant sites in the sanctuary. Underwater Science has been involved in continual

underwater investigations of these wrecks. Photographs and notes of these sites have enabled a more decisive and conclusive association of the "Mast Wreck" and "Winch Hole" sites with the *Slobodna*. This compilation of data has permitted a systematic comparison of the sites and the production of site plans.

The Underwater Science program had never endeavored to compare the two sites systematically, which was a crucial step in the attempt to interpret the archaeological evidence presented. This research has revealed that both sites contain the remnants of a late nineteenth century wreck. Of the 160 wrecks in 18 reef zones in the Florida Keys National Marine Sanctuary, the "Winch Hole" and "Mast Wreck" are the only sites that can be shown to date to the late nineteenth century.

Archaeological Evidence

The "Mast Wreck and "Winch Hole" sites contain several archaeological artifacts that support the association of these sites with the *Slobodna*. The archaeological evidence demonstrates that the sites are of late nineteenth century date and supports the historical documentation of the Slobodna and her wrecking. Numerous artifacts on the sites such as chain, iron knees, a winch, boat davits, a rudder, a mast cap, a truss parrel, and numerous dead eyes show a unique pattern of distribution. As a result of the *Slobodna's* distinctive wrecking process and the relatively close proximity of the sites, it is believed the "Winch Hole" and "Mast Wreck" sites are of the same origin.

The *Slobodna* was brought broadside to the Molasses Reef system by a squall that developed abruptly. The shallow reef system caused the vessel to pound intensely upon the rocky substrate and toss violently about in the water. Gear fixed with the deck riggings and other devices most assuredly were torn loose and tossed into the surrounding waters due to the harsh conditions. The "Winch Hole" site is believed to be the site where the vessel first struck ground. The artifacts at this particular site conform to the historical documents describing this event.

The "Winch Hole" site contains numerous artifacts associated with rigging that would be from various components of the mast and the deck. The site however lacks the remains and components of a hull which would be expected of a wreck site. Instead the site contains and exhibits many of the components of a ship's upper hull such numerous boat davits, chain, deck gear, mast partners, dead eyes, and a very large winch, all upper deck components of such a vessel.

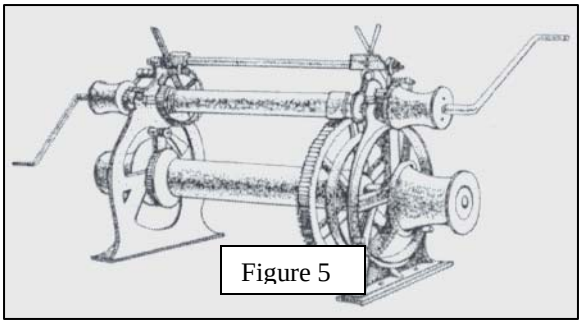


Figure 5

The "Winch Hole" wreck site's centerpiece is a nineteenth century winch that may have once been a component of the *Slobodna* (Figure 5). The winch is an 8-foot long device constructed of iron. These winches were typical on the average sailing vessel of the late nineteenth century and were used as crank-operated devices for the

storage of rope, wire, and chain. They also served as a means to hoist sails and lift the anchor (Stone 1993).

The particular type of winch associated with this site is a common find on shipwrecks during to this particular era. The winch closely resembles a halyard winch, which was usually placed aft of each mast to aid in the raising and lowering of the yards. The basic design consisted of a crank wheel, brake, and a conical drum made from iron bars scored so that rope would not double over itself, exactly what was found at the "Winch Hole" site (Stone 1993). The site also has several davits that were crane devices used for the lifting and lowering of smaller oceangoing craft, such as life boats and dinghies. In the early 1800s straight wooden davits were used, but after the 1850s curved iron poles with looped ends (Figure 6) were common on such vessels (Stone 1993).

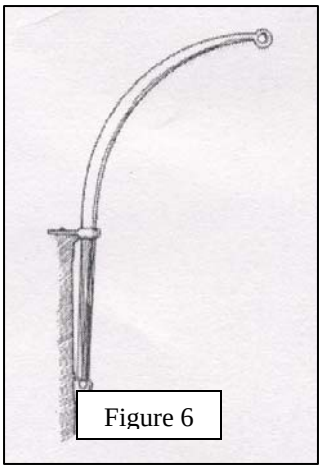


Figure 6

In addition there is a large chain cable running in a north to south orientation very near the winch. The particular chain at this site is very characteristic of the late 19th century technologies. The type of chain is an 8 inch hawser stud link chain with a cross bar in each link. Such chain was commonly used for anchors and is therefore a good indicator of a vessel's tonnage (Stone 1993). The chain at the "Winch Hole" site has a diameter very close to 2 inches. This thickness reflects a ship with about 1250 net tonnage capacity. This figure is very close to the tonnage capacity of the *Slobodna's* 1199 tons.

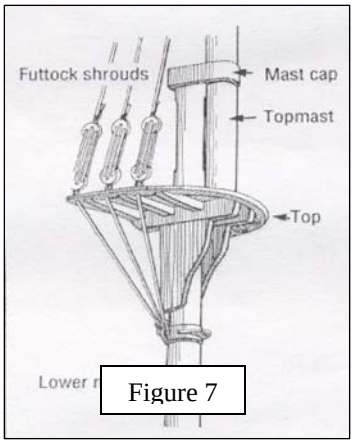


Figure 7

Furthermore the site has two large mast components know as mast caps. These devices were used two overlap the main mast with an extension, typically be made of wood (Figure 7).

The site also contains numerous deadeyes which were round flattish blocks of wood pierced with three holes and grooved around the edge (Stone 1993). Deadeyes were part of shrouds that were strung vertically from the masthead downward toward chain plate connected to the hull very near the gunwales (Figure 8). Their primary function was to allow a lanyard to be threaded into the deadeyes pulled tight, much like a pulley. The sizes of these deadeyes depended on whether the rigging was wire or rope (Stone 1993). Most of the deadeyes at the "Winch Hole" were from 7-8 inches in diameter and would have presumably been components of the topmast shrouds, either on the mainmast or foremast.

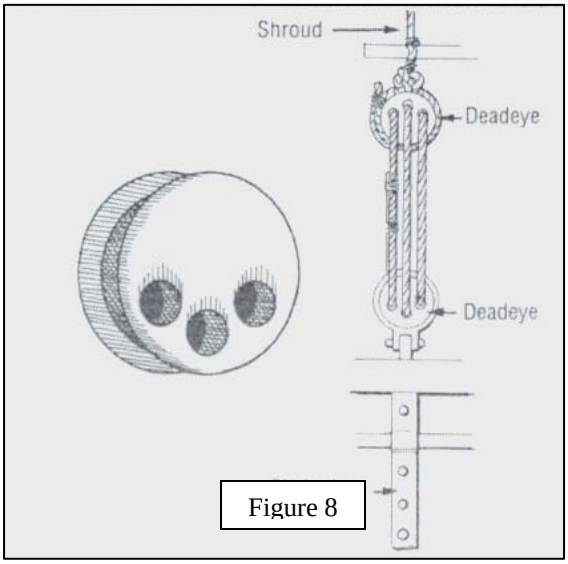


Figure 8

The "Mast Wreck" site however exhibits many of the components from a ship's lower hull. The site has numerous iron knees, chain, iron members, a capstan, rudder, and a bilge pump handle. There is also a large 56 foot mast that has a mast cap at one end, a yard arm, and numerous knees in close proximity. The significance of this mast is that it is made of a metal, presumably iron. During the late nineteenth century it was commonplace for the Mediterranean shipbuilders to construct masts of metal rather than wood, which was a scarce resource in southern Europe unlike in the America's.

Furthermore, the iron knees found at the site are indicative of late nineteenth century Mediterranean ship building; other shipbuilding regions used wooden knees. Knees were essentially right angles of wood or iron that was used to reinforce and join deck beams to the hull. Very near the mast is also what is believed to be the yardarm and also a concreted iron knee. The knee is attached to the mast which would have only been possible if over a long period of time the two would have encrusted together as the wood around it deteriorated.

Another prominent feature of the site is the rudder, which is usually large, long-lived, and easily recognized, a sure sign of the stern area (Stone 1993). As mentioned in the Federal Admiralty records this component was left intact at the site, which is consistent with the archaeological evidence.

Furthermore a truss parrel found at the site, a fitting which held the yard onto the mast enabling the crew to trim the sails to the wind was also made of iron, another indication of a late nineteenth century date for the wreck. The fact that both a yard arm and truss parrel was found at this site suggests that this particular vessel was a square topsail schooner, which is also consistent with the historical documentation of the *Slobodna*.

Recommendations

If the "Winch Hole" and "Mast Wreck" sites are in fact the *Slobodna* shipwreck, these sites contain the only representative sailing vessel of its particular type and era in the Key Largo National Marine Sanctuary within the Molasses Reef system. The significance is that such sites add to the knowledge and interpretation of this particular type and design of ships, enhancing our understanding of the past. The identification of

the sites with the Slobodna will furthermore make it possible to determine the historical significance of each site for the purpose of archaeological protection, as was the case with the 1733 *San Pedro* Underwater Archaeological Preserve created by the Office of Underwater Science.

In an effort to better interpret the "Mast Wreck" and "Winch Hole" sites, underwater site plans (Figure 9 & 10), as well as underwater diver interpretive slates (Figure 11 & 12) have been be developed. Additionally, it is recommended that the proposed web sites created for the *Slobodna* sites be posted and published on the Underwater Science web site. These web sites contain educational information and can be significant contributions to the understanding and awareness of such sites. Furthermore the use of videographic technologies, photography using time elapse techniques, and potentially the use of Virtual Reality technologies in a web-based format are among the innovative tools that would benefit the archaeological community. Examples of the various proposed sites are based on research conducted by the Indiana University Underwater Science Program and can be viewed online at http://php.indiana.edu/~cprether/slobodna/ and http://php.indiana.edu/~cprether/winchhole/. As well as using web-based technologies, it is also important to incorporate informative tools such as pamphlets to enhance the interpretation and educational values of these sites. These simple yet very informative and successful tools permit insight into maritime history as an educational resource and further the archaeological understanding of such vessels. Furthermore, the protection of the sites could be enhanced by placing mooring lines on the "Mast Wreck" and possibly a spar buoy giving identification of the "Winch Hole" wreck site. These measures will increase the protection of the sites by creating a

mooring for vessels to anchor rather than using anchors that have damaged the ecosystems around these sites. It will also promote positive diver awareness and etiquette as well as educating the public.

Ultimately the goal is to begin the process of nominating, creating, and managing the sites as historic submerged cultural resources. Underwater Science active and continued involvement in the development, management, and sustaining of underwater sites in Florida has provided a unique opportunity to improve upon the Florida archaeology and maritime resources. The artifacts found at the "Winch Hole" and "Mast Wreck" sites represent a late nineteenth century sailing vessel thus establishing that the archaeological sites corresponds well with the historical and contextual information for the *Slobodna.*

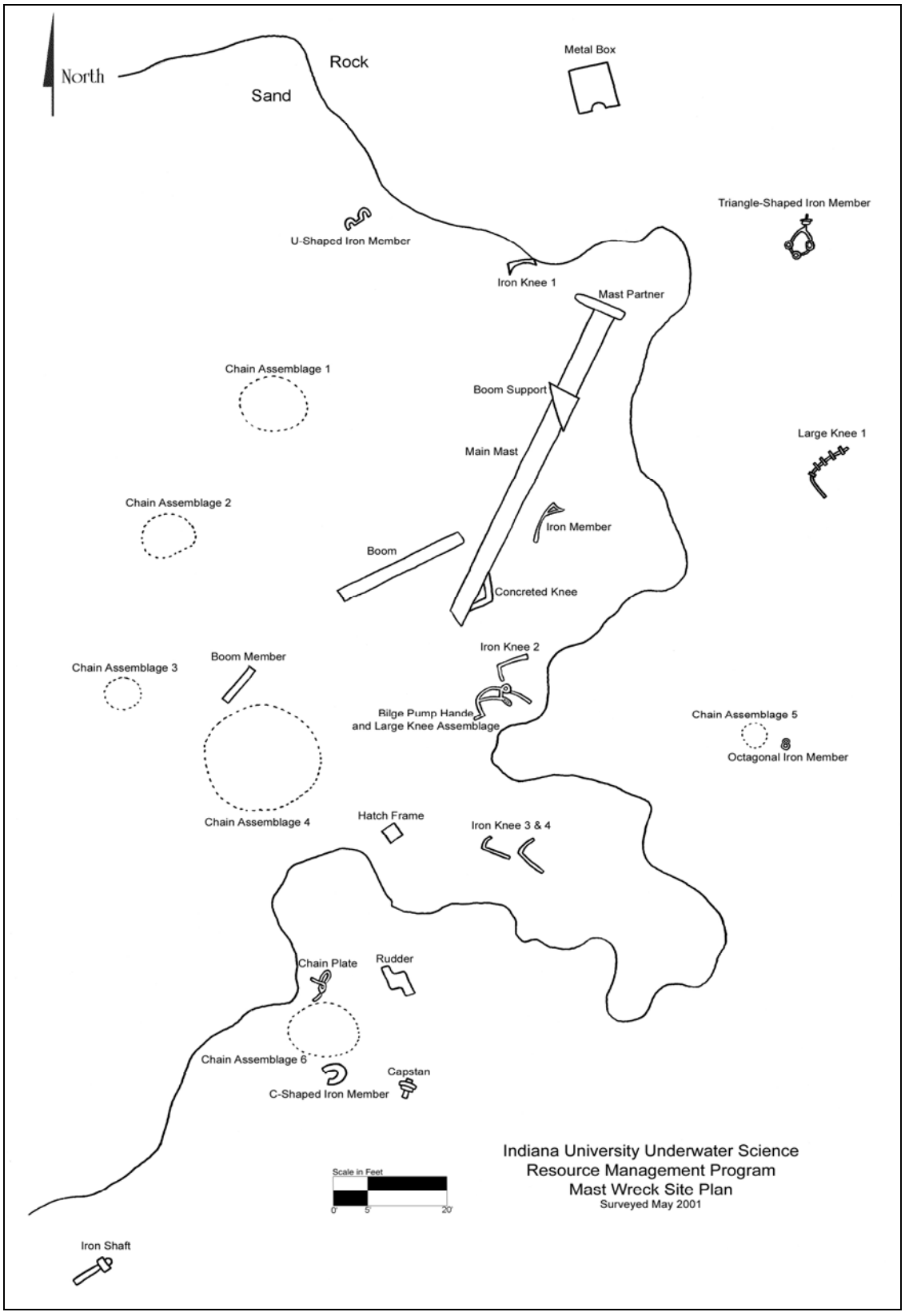

North
Rock
Sand
Metal Box
Triangle-Shaped Iron Member
U-Shaped Iron Member
Iron Knee 1
Mast Partner
Chain Assemblage 1
Boom Support
Large Knee 1
Main Mast
Chain Assemblage 2
Iron Member
Boom
Concreted Knee
Iron Knee 2
Boom Member
Chain Assemblage 3
Bilge Pump Handle and Large Knee Assemblage
Chain Assemblage 5
Octagonal Iron Member
Chain Assemblage 4
Hatch Frame
Iron Knee 3 & 4
Chain Plate
Rudder
Chain Assemblage 6
Capstan
C-Shaped Iron Member
Scale in Feet
0 5 20
Indiana University Underwater Science
Resource Management Program
Mast Wreck Site Plan
Surveyed May 2001
Iron Shaft

Figure 9

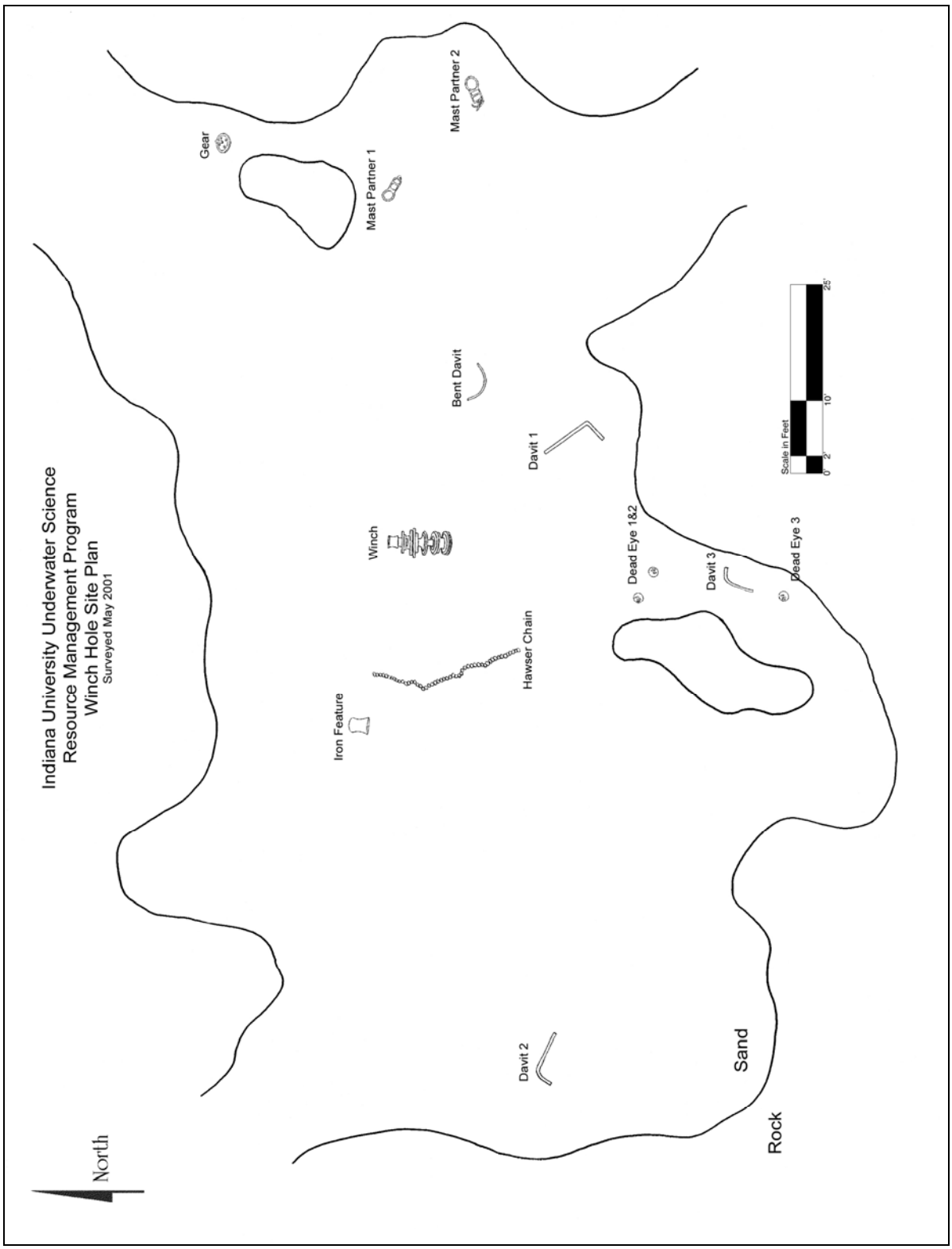

Indiana University Underwater Science
Resource Management Program
Winch Hole Site Plan
Surveyed May 2001
North
Gear
Mast Partner 1
Mast Partner 2
Bent Davit
Davit 1
Winch
Iron Feature
Hawser Chain
Dead Eye 1&2
Davit 3
Dead Eye 3
Davit 2
Sand
Rock
Scale in Feet
0
2
10
25

Figure 10

Exploring The 1887 Slobodna Shipwreck

A Brief History

The *Slobodna* was a 19th century Austrian built wooden sailing schooner constructed in Lussinpiccolo, Hungry in 1884. The vessel spanned 170 feet 6 inches long and 35 feet 4 inches wide and was designed to be used as a commercial transport sailing ship. The vessel departed that same year from the seaport of Herceg-Novi in the country of Montengro (See Illustration) on her maiden voyage.

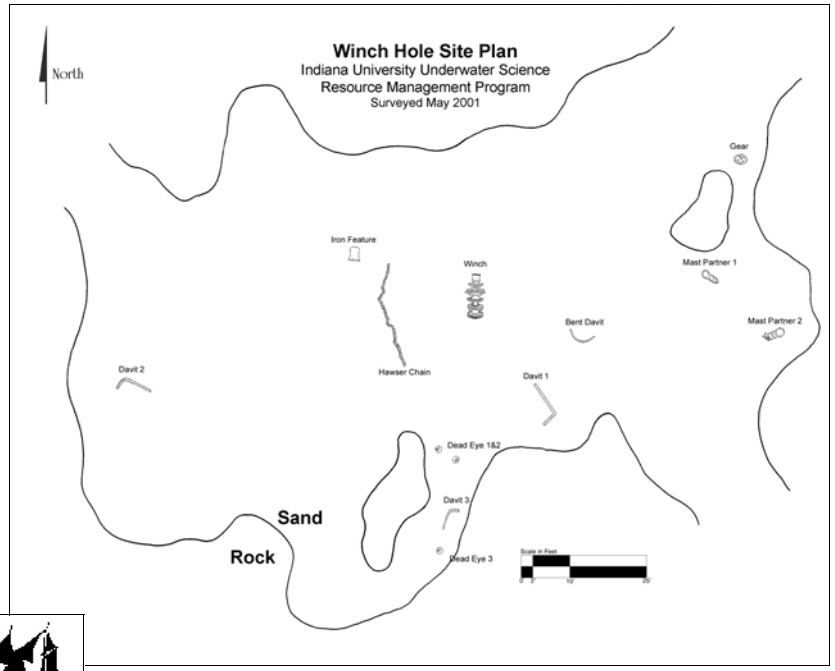
Three years later the *Slobodna* would set sail from the New Orleans seaport transporting cargo on an ill-fated trip. On its way around the Florida Keys coastline the ship experienced a sudden and severe storm which grounded the vessel on the outermost part of the Molasses Reef system in Key Largo, Florida on March 16th, 1887. After several failed attempts to free the ship from the shallow reefs, the schooner *City of Key West* moved alongside the *Slobodna* to render assistance. A chain was run out from the *Slobodna's* stern winch and anchored to prevent the vessel from grounding further. Heavy strain was put on the winch weakening it structurally due to the high tides and rough weather. The following day numerous workers engaged in the pumping, breaking out of cargo, and shifting items readying for the next high tide when the schooner *Rapid* pulled along side the *Slobodna*. That afternoon a heavy squall developed bringing about heavy seas, swinging the *Slobodna* broadside on the reef by the apparent breaking of the winch and dragging of the anchor. The rough weather caused much of the deck rigging to break and be tossed into the surrounding shallow waters in a site known as the "Winch Hole" site. As a result of this rough weather the vessel had bilged with 15 feet of water in its cargo hold and caused it to pound heavily upon the rocky substrate. The vessel drifted 3/4 of a mile until it came to rest in about twenty-five feet of water at the site known as the "Mast Wreck".

Soon after the sinking salvage workers began the arduous task of unloading the contents of the *Slobodna* and placing them upon salvage vessels. There were 335 men and 41 vessels engaged in the general salvage efforts which continued for 30 days. The operation was labor intensive and extremely dangerous. The large bales of wet cotton the *Slobodna* had in its hold weighed into the tons, making recovery and transport extremely laboring. During the latter parts of the salvage efforts, much of the *Slobodna's* hull had become so crushed that most of the unrecoverable cotton was caught between deck beams that had collapsed. The workers were ill-prepared for such an occurrence and diving activities were lacking the necessary appliances for working underwater. All salvage recovery and hoisting had to be done by hand and many workers had to free dive in order to retrieve the cotton that was submerged in the hull that was filled with a pulpy mass of loose cotton making it extremely dangerous to dive through. As a result of the salvage efforts the vast majority of cargo was recovered and no lives were lost. What remains today are two underwater wreck sites that give testimonial to what had occurred on that ill-fated day.

A Cultural and Natural Resource

The Slobodna remnants are contained within two sites known as the "Mast Wreck" and "Winch Hole" sites separated by approximately 3/4 of a nautical mile. The sites contain the only representative artifacts of this particular type and era of sailing vessel in the Florida State National Marine Sanctuary. As with any historic site, the protection, continued awareness, study, and interpretation of the past adds insight into one of many non-renewable cultural and natural resources.

The Slobodna sites provide a safe-haven for many types of marine inhabitants, promotes the recreational value of safe and smart diving, and is used as an educational tool to encourage the study and understanding of the past and importance of the preservation and protection of underwater historic sites.



"Winch Hole Site"

Site Description: Within a patch of sand surrounded by rock and coral are the scattered remnants of the 19th century sailing vessel *Slobodna*. This site is one of the most accessible and dived upon sites in Molasses Reef. The site incorporates many interesting features such as a large 8 foot winch, mast partners, boat davits, and multiple gears scattered throughout a one-hundred foot square area.

Location: Molasses Reef very near the Molasses Reef Tower.
GPS co-ordinates (25 00.573N 080 22.464W) Buoy M-35

Depth: Ranges from 18 to 30 feet in depth.

Visibility: Average visibility ranges from 35 to 60 feet.

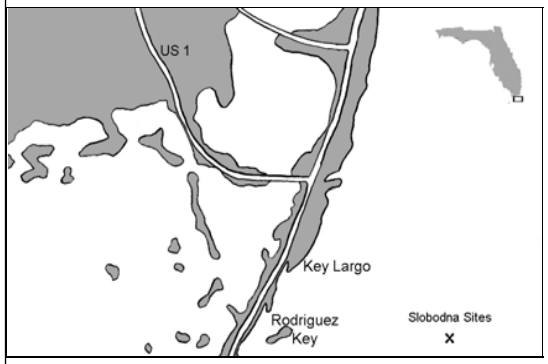
Diver Level: Open Water scuba diver, or advanced snorkel.

Figure 11

BE COURTIOUS TO THE FUTURE GENERATIONS OF YOUNG EXPLORERS..

It is our responsibility as explorers to preserve the vast biological eco-systems and to be aware of the delicate balance of man and nature by the preservation of our non-renewable resources.

Be a responsible diver by taking only photos and leaving only bubbles.



Directions

Take Highway US 1 south from any region of Florida to Key Largo and visit any number of dive shops in Key Largo and ask to dive the "Mast Wreck" or "Winch Hole" and begin your journey to the past. The sites are very accessible, located only five miles from the shores of Key Largo in 20 to 30 feet of water.

"Mast Wreck"

Site Description: Within a large patch of sand are scattered remnants of rigging and numerous hull components that are the archaeological remains of the sailing vessel *Slobodna*. A large 56 foot mast and 20 foot boom are what lay as the center focus of the site. There are numerous iron knees, chains, pulleys, metal boxes, and a bilge pump, scattered throughout a two-hundred foot square area.

Location: Molasses Reef, south and shoreward of the reef tower.
GPS co-ordinates (?N ?W) Buoy M-?

Depth: Ranges from 20 to 25 feet in depth.

Visibility: Average visibility ranges from 35 to 60 feet.

Diver Level: Open Water scuba diver, or advanced snorkel.

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IDIANA UNIVERSITY UNDERWATER SCIENCE DEPARTMENT, BLOOMINGTON
for the
FLORIDA DEPARTMENT OF NATURAL RESOURCES

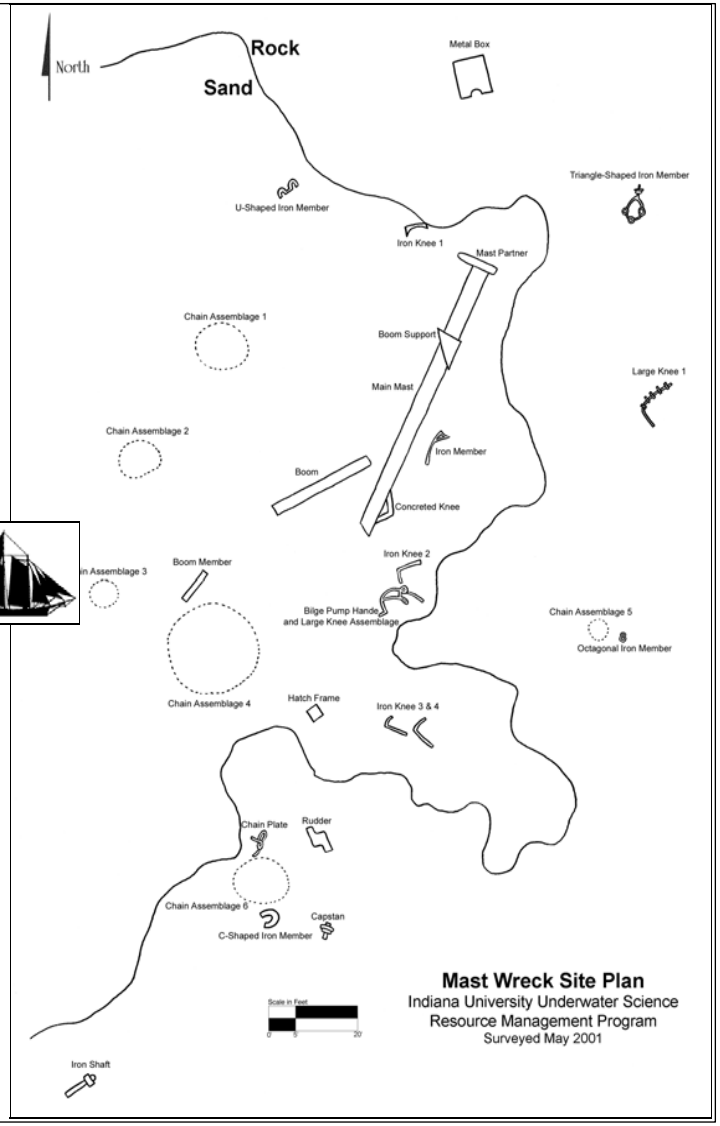

Figure 12

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KW/ADM r14/p123. Key West, Florida

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Acknowledgements

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Appendix
Slobodna Admiralty Records

Key West Federal Admiralty Records

SHIP NAME: SLOBODNA (SLABDONA) SHIP TYPE: Austrian Ship
DATE OF LOSS: 1887/03/16 SITUATION: 'Stranded/bilged
LOCATION - REEF: Molasses Reef ZONE: 3
LAT/LONG; LORAN: SOURCE: KW/ADM r14/p123

1) COMMENTS ‘: Written in record as "Slabdona". Captain T. Milinovitch (sp?), master. Bound from New Orleans to Revel (?) laden with 4,500 bales of cotton. (p. 131) "Libellant Baker ... discovered from on board his schooner, then off Conch Reef, a ship ashore on that part of the Florida Reef known as French Reef (reported by others as Molasses Reef) .... She had gone ashore about 9 a.m. that morning. Second. The ship lay upon the southern or outer part of the reef; heading N. by W. the wind blew fresh from the westward with a very heavy under tow, the master at the time having all square sails backed on the ship." (p. 137) Salvors were engaged for 30 days in performance of service; several days they worked night and day. Most of the cotton was saved; much was recovered by diving.

2) KW/ADM r14/p124: From case of Harry Strenge et al. vs. "456 bales and a lot of loose cotton saved from the ship "Slobodna": "The ship lay upon the outer side of what is known as Molasses reef with her lower hold full of water and slightly careened over on the port side and partly stripped of her rigging and all of her sails." ... Enoch Baker was principal of the salvors then engaged to assist in rendering service - offer to assist declined - 3rd. Tues. March 22nd, 1887 - part of the ship's spars were cut away by the first salvor and on Wed. 23 March, libellants were invited to assist. (Pg. 124): "...assigned to them for that purpose the space from the fore hatch to the forepart of the ship in the lower hold.

3) "Fourth. In this space thus assigned to libellants all the cotton lay under water, that is, the top of the tier on the starboard side was even with the water's edge and that on the port side lay about six feet under the water.

4) "Fifth. Libellants began work on that day the 23rd of March by taking cotton out of the space aforesaid and continued from day to day including Sundays until Tuesday the 7th day of April, at which time their vessels were loaded and the divers reported that it was impossible to obtain any more cotton if any remained because of the loose cotton which lay some ten feet deep in the bottom of the ship.

5) "Sixth. That all of the cotton was taken out of the water and as the work progressed it became necessary to dive for same and this necessitated the making a special contract with those willing and able to perform that service, whereupon (Pg. 125) an agreement was entered into, with the divers that they should receive twenty-five cents for each and every bale of cotton dived up, and by this means two hundred and forty six (246) were saved."

6) Sixth. [repeated] Libellants took cotton to Key West. Seventh. "...they have worked arduously and honestly in the performance of the aforesaid service, that all of said cotton was taken from the water and portions of it dived up from water twenty feet deep ... they are unable to ascertain the value of said cotton in its present condition"- asked for an appraisal.

7) (Pg. 131) Enoch Baker testimony: "...on Wednesday morning the 16th March A.D. 1887 at about 9 A.M. he discovered from on board his schooner, then off Conch Reef, a ship ashore on that part of the Florida Reef known as French Reef. He immediately proceeded to said ship, and on boarding her at about 10 A.M. same day learned from the master, that it was the Austrian ship Slobodna, laden with 4500 bales of cotton and bound from New Orleans to [blank] and that she had gone ashore about 9 A.M. that morning.

8) "Second. The ship lay upon the southern or outer part of the reef, heading N. by W. the wind blew fresh from the westward, with a very heavy under tow, the master at the time having all square sails backed on the ship, and his crew employed moving and taking the chains from forward to aft.

9) "Third. Libellant Baker then offered his services to the master which was not accepted until about 4 P. M. when the schooner City of Key West was hauled alongside, and under the starboard bow of the ship and the ship's starboard anchor weighing 3,000 lbs. with 30 Fathoms of chain and 85 fathoms of a new 8 inch Hawser, were placed on board of her, a warp was then run out in a S.S.E. Direction from the ship, and a small anchor let go, the end of the warp carried to the schooner City of Key West, where she was hauled out to the small anchor, and the ship's starboard anchor let go in 8 fathoms of water, a strain was then hove on the hawser, with a four fold purchase, from the stern of the ship.

10) "Fourth. That while a portion of the salvors were engaged in carrying out the anchor, others were employed at the pumps, the ship having 6 feet of water in her hold, your libellant making the soundings around the ship, and at high tide, (finding that the ship had under her bows on both sides 18 feet, and under her stern 24 feet, the master informing the said libellant that the ship drew before going ashore 17 feet forward and 18 feet aft.

11) "Fifth. At 11 P.M., the tide rising a heavy strain was kept on the hawser until the tide began to fall, the pumps being attended to with both pumps going during the night except the starboard pump which gave out several times during the night and had to be repaired up to which time they had reduced the water in the ship, the water gaining on them with only one pump working.

12) "Sixth. At 9 A.M. the 17th the schooner Rapid was hauled alongside for the purpose of lightening the ship when they were obliged to haul her off on account of the weather, having placed on board of her only 29 bales of Dry Cotton, the other vessels except the Nonpareil being obliged to leave the ship, and make a harbor, leaving about 60 men on (Pg. 133) board of the ship, who were engaged in pumping, and breaking out cargo, and shifting it aft, getting ready for the next high tide.

13) "Seventh. At 2:45 P.M. a heavy squall came up from the S.S.W. with a very heavy sea, when the ship started astern with her stern swinging to the Northward and Eastward, and at the same time bringing the anchor home(?) continued to swing in that same direction until she headed to the S.W. laying broadside to the reef, the ship striking

and pounding heavily upon the bottom while swinging, after the ship had swung broadside to the reef, put a stopper on the hawser, then led the end of the hawser forward to the capstan, by this time the wind had jumped to the northwest and blew very hard, when the jobs were twisted, the stopper cut, and the slack of the hawser taken in, when a heavy strain was placed on the hawser, but could not move the ship, took in sail again, sounded the pumps, and found that the ship had 15 feet of water in her hold, libellant then informed the master that it was useless to pump any further as he was satisfied that the ship had bilged, at the same time calling the master's attention to the fact that the men were pumping up articles of grounded plank, sand and coral, the master requesting libellant to pump one hour longer which was done, but without gaining on the leak.

14) "Eighth. At the time of the ship starting, libellant sounded the pumps as the ship had pounded heavily upon the bottom and found 4 ft. 1 inch of water, 10 minutes later, again sounded and found 4 feet 3 inches, 10 minutes later again sounded and found 6 feet 1 inch, 10 minutes later and at the time the ship had gone broadside to the reef, again sounded, and (Pg. 134) found that the ship had 15 feet of water in her, it being about 5 P.M. of the afternoon of the 17th."

15) Commenced loading vessels with bales of Dry Cotton. (Ninth, Tenth, Eleventh, Twelfth. Mon. 21st - "Before the salvors could finish loading the Eliza Bennett the wind came up from the S.E. blowing' fresh, causing a heavy roll, and swell upon the reef...." The Salvors were obliged to haul her off till morning. From the thirteen entry through the twenty-fourth (Pg. 135 and 136) on Saturday the 9th of April, the Salvors were working continuously saving cotton from the lower hold. They recovered 1,157 bales of wet cotton. The weather was again bad on the 9th and it was too rough to bring vessels alongside until Wednesday, April 13th, when they again began loading.

16) (Pg. 136) Only 22 bales were saved, "...the divers being exhausted and the condition of the ship making it entirely too dangerous to work in the lower hold. "Then on Thursday the 14th they abandoned the work after saving the rest of the ship's materials.

17) "Seventeenth. Libellants would further give the Court to understand that they saved 3,540 Bales of cotton, out of which number they have saved Dry 1650 Bales, partly wet 584 Bales and 1306 wet bales, That 1081 bales were saved by actually diving for which they have paid from 25 to 50 cents per bale, that the divers were subject to severe pain from their eyes, a number of whom had to give up diving, That several of the salvors were injured by falling blocks, and being struck by bales of cotton, that several of the vessels were damaged while alongside of the ship, having their bulworks (sic) stove in."

18) (Pg. 137) The salvors stated that they were engaged for 30 days in performance of the service and for several days they worked night and day. They estimated the value to be $175,000.00.

19) (Pg. 139) On April 4, 1887 a letter was written by F. R. Maloney, Notary Public, informing Capt. A. A. Fengar of the U. S. Revenue Service, Commander of the U. S. Revenue Cutter Crawford; Lieut. T. S. Smythe, Ex-officer of the U. S. Rev. Cutter Crawford; and Wm. H. Pierce, Master shipwright:

20) "You are hereby appointed a board of survey on the Austrian ship Slobodna now lying ashore on Molasses Reef where she struck on Wednesday March 16th with a cargo of cotton while bound from New Orleans to Reval.

21) "You are requested to proceed to that point and hold a strict and careful survey in said vessel making a close examination of her condition and a statement of the damage she has received and of the probabilities of saving the ship, you will make such recommendations regarding her condition and disposition as may seem best to you for the interest of all parties concerned and for the purpose of advising the master as to his future course. In case you find it impossible to come to any determination about the ship's bottom without the aid of a submarine diver you are authorized to engage one who will make his report to you." (Copy certified in text).

22) (Pg. 140) Reply to F. R. Maloney, Dated April 6th 1887:

"We the undersigned having been appointed a board of survey on the Austrian ship Slobodna ashore on the Florida Reefs, have the honor to report that we have this day repaired alongside and on board said ship and made a thorough examination of her hull spars, rigging and apparel, as requested and find as follows:

23) "The Slobodna is stranded on an outlying reef equidistant between Pickles reef beacon and French reef beacon, and is lying in fifteen feet of water on hard but rocky bottom, Rodriguez Key bearing by compass N.W. by W. 3/4 west about 4 1/2 miles distant. Tavernier Key bearing W. by S. 1/8 S. about 6 5/4 miles. The ship is listed off-shore and lying on her port bilge and is heading about S. W. Her cargo of cotton consisting of about 4500 bales has been nearly all removed there remaining but about 400 bales at the time of this survey with every probability of nearly or quite all of it being saved. The ship's hull as far as can be seen is in fine condition, not a butt or seam started or the least show of starting visible anywhere except that a water tank under the forward house has been raised some 14 or 15 inches, as this tank rested on the (Pg. 141) keelson, it is not probably that it has been lifted from its bed by any other cause than from swelling of cargo,

24) "From testimony obtained among the wreckers it is evident the ship has never moved from her bed since swinging into her present position. Her bilges may have chafed more or less and it is reasonable to suppose they have from the swell occasioned by the strong breezes of several days ago. But the ship having very little dead rise an examination of her bottom where she now lies is impossible.

25) "The wreckers have removed the steering gear, but the rudder is intact and working freely, ten (10) lower deck beams have been cut to remove the cargo and one (1) carlene have been cut for like purposes. A thorough inspection of the ship between decks does not show in a single instance any starting of knees either hanging or on (loson?) or any weakening of fastenings.

26) "Her topmast have been cut away to enable wrecking vessels to get alongside, but her lower masts, bowsprit, lower and topsail yards are intact, her lower standing rigging is also in good condition, the sails and running gear have been saved.

27) "The wreckers have in our opinion prematurely removed the metal from the starboard side as far down as it could be reached otherwise they have not damaged the vessel or appurtenances more than the circumstances would admit. Two (2) cargo ports are out on the port side in order to admit a free flow of water, for the purpose of working the cargo, but can be secured when necessary.

28) "We are of the opinion that the value of this ship warrants extreme efforts to release and bring her into port. We recommend the procuring (Pg. 142) of powerful steam pumps and after closing the cargo ports now open under water and removing as much of

the 150 tons of stone ballast as possible (which is now in the bottom of the vessel) that an attempt to free the ship of water be made and if successful (which at present looks feasible) she be towed to a place of safety for further examination. If the pumps or other means of freeing the ship are not available or cannot be procured at a reasonable cost, compared with the value of the ship, we recommend the sale of hull and apparel as she now lies, for the benefit of whom it may concern."

Signed by the Board of Survey: A.A. Fengar, Captain U. S. Rev.
Percy W. Thompson 3rd Lieut. U. S. Rev.
William H. Pierce Master Shipwright

(Certified to be a correct copy in the record.)

(Pg. 143) "And an April 22nd A. D. 1887 report of survey was filed as follows:

"Key West Fla. April 20th 1887

"Hon. J. W. Locke, Judge of U. S. District Court &c. &c.

"Sir:

29) We the undersigned having been appointed by your honor a board of survey on the Austrian ship `Slobodna' stranded on Molasses Reef, Florida Keys have the honor to report in obedience to the instructions contained in your order, that we have this day repaired on board said ship `Slobodna' and have made a careful and thorough survey as the circumstances of the case would admit. We found the ship lying on her port bilge (Pg. 144) with her head to the southward and westward, in about 23 feet of water aft, 18 feet of water amidships, and 15 feet of water forward. The ship is water logged, her back is broken, and she is badly lugged (?). The deck is lifted fully a foot amid ship, Deck houses and batch combings started. Water nay? butts and deck seams open. The hanging knees to the second beams as far as can be seen are broken at the shoulders and the beams as well as the lower deck beams are adrift.

30) "The stern post is started; the mainmast has been unstepped by force of the sea and cut away to prevent further damage and is now lying alongside with wire rigging attached.

31) "The fore and mizzen masts are still standing. The ship's bottom is without doubt badly stove on the port side, from the fact that she has settled so deep that the front? planks hear is covered amid ship at high water. The ship has so heavy a list to port as to make it difficult to walk the deck. The `Slobodna' is a complete wreck and beyond help. We recommend the sale of the ship as she now lies for the benefit of all concerned. "

Board of Survey: A. A. Fengar, Captain U. S. Rev.
Wm. Black, Ship's Master
William H. Pierce, Master shipwright.

[There is no certification of this document and no explanation why it differs so from the previous report filed.]

KW/ADM r14/p157: Judge's Decree: Case of Enoch Baker et al vs. Cargo.

32) "This vessel laden with 4500 Bales of cotton, from New Orleans bound to Reval, went ashore on a projecting point of rock between French and Pickles Reefs, on the Florida Coast, about

100 miles from this port, on the morning of the 16th of March 1887, at about 9 o'clock where she was soon boarded by the principal libellant in this case, where offered his assistance.

33) "The vessel lay upon the extreme outer point of the reef on hard rock bottom, she was under considerable sail with a fresh wind when she struck and went ashore so as to be lifted fully two feet from her ordinary draft from her main chains forward, at high water, at low water much more.

34) "For a time the master thought he would be able to get his vessel afloat so declined to accept aid, but at length, at about 4 o'clock that afternoon, finding his efforts ineffectual accepted the assistance of the libellants with several of their vessels there at the time, all professional licensed wreckers who carried out a 4000 pound anchor with 30 fathoms of chain and 85 fathoms of 8 inch hawser and let it go in deep water and as the tide rose, heaved heavy strains with all the power they were able with a four fold purchase led to the capstan. A part of the Libellants manned the pumps as there was found 6 feet of water in her hold, and finally reduced it to 4 feet. They hove with what force they could until two hours past high water that night, but were unable to move the vessel.

35) "A portion of the libellants then went to breaking out and moving cotton aft, others constantly pumping in order to keep the water down. The next morning one schooner was hauled alongside to take cotton, but by the time she had received 29 bales, the wind increased and the weather became so bad that she was compelled to drop off, and all the vessels with one

(Pg. 158) exception had to leave their anchorage outside the reef and go inside to seek a harbor, leaving 60 of the libellants on board who continued pumping, breaking out and moving cargo aft, and heaving at the anchor as the tide rose. At Four o'clock that afternoon the 17th the weather became worse, the wind shifted to the southward - a dangerous point, and a violent squall struck the ship with such force as to lift her off the bottom, so that the Libellants succeeded in moving her astern, nearly if not quite half her length, but unfortunately the anchor at that time dragged. The ship partly relieved from the bottom, swung broadside onto the reef and thumped and pounded heavily, at the same time increasing the leak so rapidly that within 40 minutes the water gained, notwithstanding constant pumping, from 4 feet to fifteen; the depth she was in, where it continued. After pumping a long time the libellants concluded that the vessel had bilged and proceeded to save cargo.

36) "The salvors, already represented by libel or petition have saved 4310 bales of cotton and an amount of loose cotton estimated at about 142 bales and others are still at work saving what yet may be got from the wreck.

37) "The bales were very heavy, many of them weighing over a half ton as they came out of the water. It is true, the vessel has been lost but the cargo has or will be almost entirely saved, though in a damaged condition.

38) "There were 335 men and 41 vessels, two of which were steamers, engaged in the general consort and who worked all the time the weather was such that they could work at the ship, for a month lacking two days, part of the time it was impossible to work on board or be alongside. 9 vessels and 69 men have also worked more or less on their own account and saved 861 bales outside of the general consort.

39) "The work has been laborious in the extreme, the bales of cotton were pressed into the ship with much force at first, and being wet had become greatly swollen. During the latter part of the service the bottom of the vessel was so crushed up that it held the bales under (Pg. 159) the beams so that it was almost impossible to break them out, many of them were broken, or necessarily pulled apart, until the water was filled with a pulpy mass of loose cotton and broken ties and dunnage, that made it very difficult and to a certain extent dangerous to dive through it.

40) "The salvors had no appliances for diving or saving labor, but it all had to be done under water by naked divers and hoisted by hand. The bales had become so saturated and heavy that they would not float, but each had to be broken out and slung underwater. About 1700 bales have been dove up from more than 6 feet of water and from that to 18 feet, and about 150 of loose saved in the same way.

41) "The great question in this case that must influence the amount of salvage is, did the salvors do their whole duty in their attempts (sic) to save the property?

42) "First, Was there any dereliction of duty in not preventing the vessel from swinging again aground when partly relieved from the bottom; and secondly, Could they have pumped her out and saved her after she had been partly lightened of her cargo?

43) "Salvors are held to a strict accountability for everything which is omitted to be done by
them for the saving of property by every means within their power, and if from lack of energy, judgment, or skill, they fail in one particular the amount of salvage awarded, if any, will be reduced accordingly. It is not only honesty of purpose but skill, energy, and good judgment to use every appliance which they can possibly command, that is demanded, yet Courts
(Pg. 160) cannot require impossibilities of them and must only consider the means under their control.

44) "In this case was it within their power to have foreseen by any degree of care or diligence the probability of the anchor dragging and prevented it? In the case of the St. James the vessel was permitted to swing back onto the reef by the breaking of a hawser when the salvors had shown a most deplorable lack of skill or judgment in using a small line to lengthen out a large hawser when it was within their power to have used a larger one or increased the strength of that used by several doublings, and the entire salvage was forfeited (Records of this Court, 1872). But in this case the depth of water was properly selected, the largest anchor carried out in the best direction with the strongest hawser that could be obtained. The weight of the anchor was such that no reasonable man would have considered it necessary to back it with another, but would have presumed it to hold in bottom such as it was known to be, as much or more than the hawser.

45) "It seems that at the time of the service anyone would have conceded that everything had been done within the power of the salvors to float the ship and but for the change and increase of the wind, the suddenness of the violent squall and sea, and the accidental breaking out or dragging of the anchor through the rock where it first held, it would have been successful.

46) "The suddenness and severity of the wind and squall prevented anything being done after the anchor had started until it was too late, and the vessel was evidently bilged and leaking so badly that no power of the libellants could control the amount of water in her. I am not satisfied that anything more could have been done to float the vessel than

was before she started from the bottom or to prevent her going ashore again. After partly discharging her, the question was very properly suggested both by the wreckers and a board of survey whether she could not then be floated and (Pg. 161) brought to port, but in order to do that it would be necessary to control the water coming into her or undoubtedly she would have sunk in deep water. Had the libellants had at their command a powerful steam pump or had it been within their power to procure one and they had not done so and endeavored to float her, I should have certainly have considered them lacking in energy and enterprise requisite for such an occasion, but they had none. The master wrecker came to Key West and endeavored to procure one but was unable and upon his return found that the vessel was undoubtedly so broken as to be beyond recovery.

47) "They have therefore done all they could do in saving the cargo, materials, and stores, and bringing them to a place of safety. What amount ought they to receive for this service? It is unquestionably a salvage service. The property was in jeopardy of certain loss: it was only by such means as were used that it could be saved.

48) "It was an almost uninhabited coast, a hundred miles from any assistance and several hundred from any except what did offer itself.

49) "It was on a dangerous reef the approach to which was at all times more or less perilous to vessels. The weather was bad part of the time and all the salvors' vessels were more or less exposed to dangers entirely different from those of ordinary navigation. The actual labor was arduous and long continued, perhaps the number of men employed for the time occupied may not be a true measure of the actual labor performed, as a good deal of the time was taken up by the small vessels bringing cotton to Key West, discharging it and returning. Also there was some of the time when it was impossible to work at the ship, as the sea was sweeping entirely (Pg. 162) over her and all of those engaged in the service were compelled to lie at anchor inside of the reef. But their time was occupied either in working or waiting, and I consider the circumstances justified the employment of the large number. Nor, am I prepared to say that it could have been done with a smaller number or in a shorter time."

50) "...I do not consider than an Admiralty Judge should depart from usual rates given in similar cases, and decree according to his feelings at a particular time, whether liberal and generous or otherwise, in salvage cases more than any other class of cases. In questions of salvage, Courts cite precedents of amounts and it is presumed somewhat guided by those cases the nearest parallel in circumstances unless good reason is found for a variation...."

[Cases are cited which pertain to the Judge's decision regarding the amount of salvage to be awarded. The vessels cited were: (Pg. 163): "The Brothers," "The Fleece," "Friendship," "John Gilpin," "Comanche," "Thetis," "America," "Telamon," "Yucatan," "Brewster," "Isaac Allerton," "Nathan Kimbal," "Maryland," (Pg. 164) "May Howl," "Alfred," "Corn Nellie," "Ajax," "Emery," "Norway," "Kristrel," "North America," "Tellumah,""Elizabeth Bruce," "Alitralia," "Concordia," "Mary Hale," "Helen E. Brooks," "Mimie," (Pg. 165) "Mulhouse," "Indian Hunter," "Eliza Mallory," "Mary Coe," and "Ocean Belle."]

51) (Pg. 163) "The Ship 'Yucatan' laden with cotton and rock? was lost near Cape Florida. The salvage was 43% on the cargo saved, shares $62.

52) "The 'Brewster,' cotton laden, was lost on Carrysford reef, Salvage 1-3.
53) "The 'Isaac Allerton' was driven over the reef and sunk in five fathoms of water, over 400 persons were engaged in saving cargo; one half of the net value of the amount was decreed... ."
54) (Pg. 165) "1859. From the wreck of the 'Indian Hunter' salvors saved 3432 bales of cotton valued at $88,220. Salvage of 25%, 42, and 50% was given upon the dry, damaged, or saved by diving. The last case cited was almost precisely similar in the locality, season of the year, and character of the services rendered with the one under consideration."
55) "These were a few of the cases of similar character as the present decided in this Court previous to 1861, and in an opinion in the "Ocean Belle" that year, Judge Marvin remarks, 'The most usual rates of salvage for saving cotton on this coast when the ship has been lost and the cargo saved, has been 25% on the dry, 40% on the wet saved without diving, but taken from under water and 50% and in some instances 55% and 60% for saving it by diving in the lower hold.'"
56) "In the fall of 1865 during a severe hurricane several large cotton ships were driven ashore or on to the reef, and more than a million and a half dollars worth of cotton was saved within a short space of time..."
57) [(Pg. 166) Vessels listed as lost during this hurricane: "Bickmore," "Caroline Nesmith," "Howard," "John Wesley."]
58) (Pg. 166) "Since these cases there have been comparatively few vessels lost on this coast from which cargoes have been saved under similar circumstances, there have though been some." In 1871 a portion of the cargo of the Spanish bark 'Aquila' was saved for which the Court paid 27% of the dry and 42% of that wet and damaged, and 50% upon that saved by diving." [Also cited: "Mississippi," "Northwester"]
59) (Pg. 167) "In 1872, the brig 'Amazon' was lost on the reef in the vicinity (sic) of where the Slobodna was, and her cargo consisting of cotton was saved in the same manner, 35% was given upon the entire cargo.
60) "In the same year the ship 'St. James,' loaded with 1500 tons of Rail Road Iron was lost on the same reef. The cargo was saved with great exposure and labor, 50%, 62%, and 68% were given upon the net proceeds.
61) "In 1874, the British steamer 'Mississippi' was run onto Fowey Rocks near Cape Florida when she filled with water. Her cargo consisting of the looser heavier kinds of assorted merchandise, cotton ties, hard ware, earthen ware, &c. was save partly dry and partly by diving or hooking up from the bottom. The salvors were saved to (sic) great deal of labor as all the hoisting and discharging was done by the hoisting engine of the steamer, 30%, 40, and 50% was given according to the circumstances of each class of cargo saved, whether dry from the top of the water or by diving. The crews of two of the vessels that arrived first at the wreck shared $50, but the others from $15 to $32"
62) "In 1879, The 'Mary E. Riggs' laden with cotton (Pg. 168) struck the reef but a short distance from where the 'Slobodna' went ashore, and bilged before the salvors were enabled to get her afloat. They saved 4,646 bales of cotton, but the ship broke up before they could complete the service and about 300 bales went adrift."
63) (Pg. 169) "It is to be regretted (sic) that the modern wrecking appliances can not be introduced upon this coast, but the nature of the service, the extent of the reef line to be watched and the uncertainty of remunerative employment has so far prevented it. The

character of the bottom, sharp coral rock, demands that the assistance to be of service must be speedy. The introduction of improvements (sic) requires the concentration of capital at one point that the lack of means of rapid communication renders oftentimes useless. In this case, the cargo has been appraised by appraisers appointed by the Court, in its present condition and circumstances at $46 per bale for the dry cotton, $38 per bale for that partly wet, $27 for that wet and $16 per bale of the loose cotton, and no objections have been made to the same. The materials and stores have been sold for $2751, and the proceeds brought into the registry of the Court.

64) "Considering the entire case and all the surrounding circumstances it is ordered that from the foregoing values all the expenses of landing, storing, watching, and labor heretofore incurred and the costs herein be deducted and the libellants and petitioners have receive and recover the following rates for salvage on the net values so found of the quantities severally saved by them to wit:

"On the cotton saved dry and appraised at $46. per bale, 25%.
"On that partly wet and appraised at $38. per bale, 33 1/3%.
"On 435 bales wet saved from water less than 6 feet, 40%.
"On the balance saved by diving in water more than 6 feet in depth and loose, 50%. "And inasmuch the crew assisted in stripping the ship, the libellants receive 45% of the net (Pg. 170) proceeds of materials and stores and that the matter be referred to E. Locke, commissioner of this Court for investigation and computation as to the amounts severally due libellants and petitioners hereunder. This will make the individual shares about $45 which is small compensation, but as a proportion as I can feel justified in awarding."

(Signed) James W. Locke, Judge.

65) (Pg. 174) "Having computed the salvage on the net value of property saved, under interlocutory decree of the Court I report the salvage to be as follows:

"Enoch W. Baker et al. on Materials oc.		$ 1,102.75
"On 1650 bales dry cotton, 584 partly wet, and 1306 wet, and 62 1/2 loose		41,233.97
	42,336.72	
"H. Strenge et al on 456 bales of wet and 13 1/2 bales loose cotton.	5,256.97	
"Peacon et al. on 145 bales wet & 31 1/4 bales loose cotton		2,017.31
"A. Albury 29 bales wet & 3 loose		379.90
"Ob. T. Roberts 13 bales wet & 3 1/2 loose.		185.92
"J. A. Russell 1 bale wet and 22 1/2 boxes		175.47
"E. de Vedig 38 bales wet cotton		458.34
"E. de Vedig 2 bales loose cotton	25.46	
"J. R. Russell, 52 bales wet cotton		642.20
"T. Curry 6 bales wet and 6 bales loose		117.60
"E. Weatherford, 30 bales wet, 1/2 loose		374.12
"J. Roberts, 2 bales loose.		14.50
"May 15, 1887"		
TOTAL:	$51,984.51	