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Silver Fever in The Bahamas:
the Historical Salvage
of the Maravillas

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Silver Fever in The Bahamas: the Historical Salvage of the *Maravillas*

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The sinking of the *Nuestra Señora de la Maravillas* off the western Little Bahama Bank in January 1656 triggered an incredible fervor in the late 1650s and 1660s of Spanish dive teams fishing for the wreck's silver bullion. The severity of the personal tragedy and financial loss was compounded by the *Maravillas's* transport of an earlier treasure cargo that sailed and sank on the *Jesus Maria de la Limpia Concepción* off Chanduy in Ecuador in October 1654. To add to the incredible ill-fate of the *Maravillas*, three Spanish ships salvaging the *Maravillas* were lost in a storm in August 1657 and foundered off the Mimbres, Grand Bahama and Gorda Cay. English and salvors from the Americas continued where Spain left off in the 1680s. This report summarizes the historical efforts by wreckers to fish the *Maravillas*, emphasizing how the expeditions impacted the site and led to the modern site formation of the galleon's wreck.

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1. Introduction

Since 2019, Allen Exploration (subsequently AllenX), under license from the Government of The Bahamas, has surveyed the waters west of the Little Bahamas Bank for remains of the wreck of the *Nuestra Señora de la Maravillas*. The 891-ton, two-deck Spanish galleon, sunk on January 4, 1656 (Fig. 1), was heavily salvaged by Spanish wreckers almost immediately following the loss (Fig. 2). English and colonial salvors from the Caribbean world and the Americas followed in their wake. An estimated five million *pesos'* worth of silver bars, coins and worked silver were recovered between 1656 and 1683.¹

This report introduces the salvage efforts focused on the *Maravillas* over 27 years (Table 1). Historically fascinating in their own right, a more complete understanding of these sources is essential to appraise how the galleon was transformed by nature and anthropogenic impacts into a wreck: what tools were used, how extensively was the ship worked, what was missed and what survives? In turn, this data feeds into attempts to reconstruct

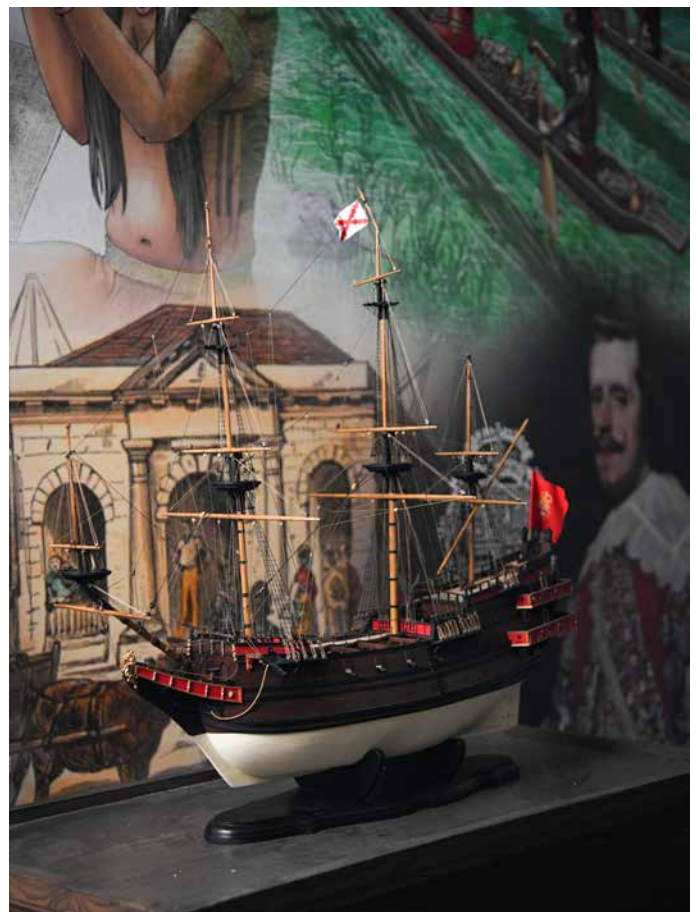


Fig. 1. Model of the Spanish galleon the *Maravillas*, lost off the western Little Bahama Bank in January 1656. Photo: © Allen Exploration.

how the sprawling scatter of cultural remains ended up spread up to 5.4 kilometers south of the main ballast pile.²

This report does not examine the modern salvage of the 1970s to 1990s by Robert Marx of Seafinders, Inc. and Herbert Humphreys of Marex International or the archaeological surveys of Allen Excavations conducted since 2018.

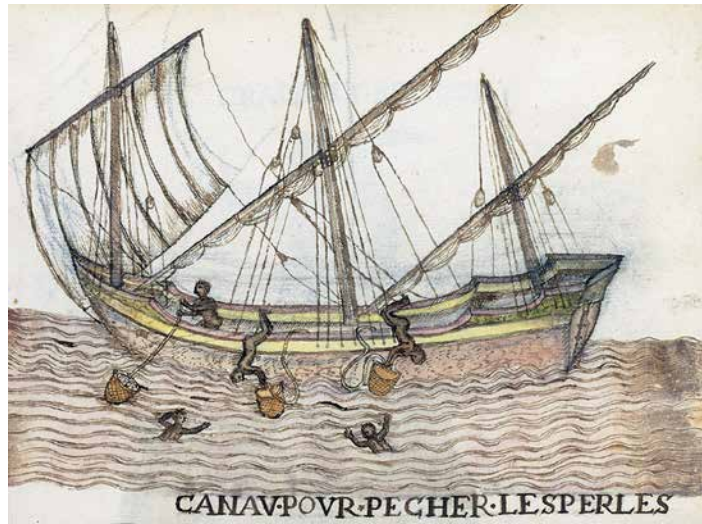


Fig. 2. Enslaved Africans diving for oysters and pearls off Margarita Island, Venezuela, were relocated to the *Maravillas* with pearl-harvesting technology in the later 1650s. From *Histoire Naturelle des Indes*, c. 1586, Folios 56v–57r.

2. Pioneering Historical Salvage

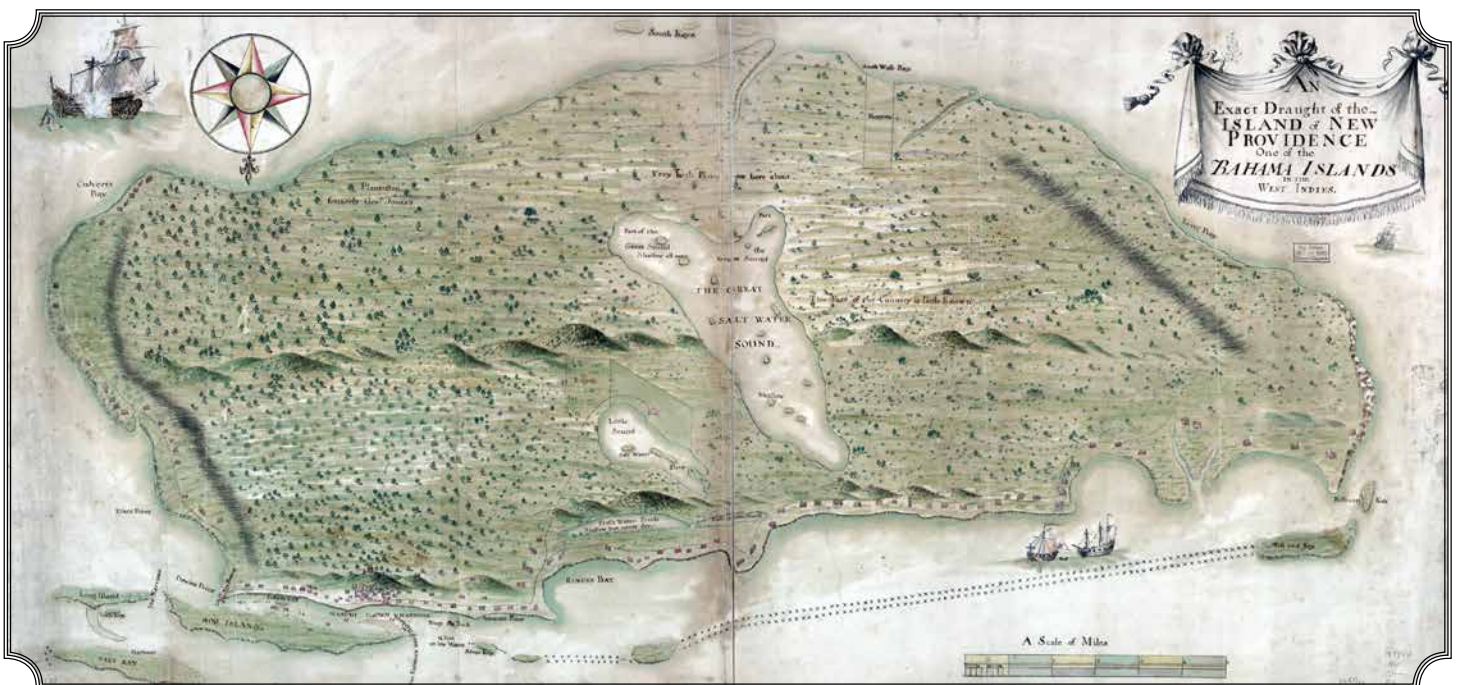
Because of its rich double cargo, organized salvage of the *Maravillas* was a priority for Madrid. The galleon was most frequently described by historical sources as having transported “five million” (*pesos* value) in gold and silver, grain, fruit, indigo plant, skins, hides and *brasilete* (brazilwood).³ The upper estimates of officially registered treasure took the form of 506 bars of silver, 8 *barratones* of silver, 82,220 pieces of eight, 696 *marcos* of silverware and eight more chests of silverware.⁴ These totals exclude mass contraband.

Despite the Mimbres, where the *Maravillas* sank off the central western Little Bahama Bank, being described by contemporary Spanish salvors as a long way offshore, difficult to find, stay in and escape enemy ships, not to mention being infested by “monstrous sharks,” the wreck witnessed an incredible level of salvage between 1656 and the later 1680s. Standard conditions allowed salvors a 50-50 share of any treasure with

the Crown, in return for shouldering all costs and risks.⁵ However, in 1678 Martin de Melgar’s cut was diluted to 25%,⁶ while Esteban de Beroa was awarded a paltry 7% in 1679.⁷

No time was lost organizing the first salvage. Advisors recognized that shifting sand and malicious rip tides could destroy and cover the wreck in a short period of time if they did not act swiftly. Or, worse, enemy nations might discover the treasure.⁸ The first salvage team reached the wreck just five months after the loss, only to be disappointed in June 1656

Fig. 3. *An Exact Draught of the Island of New Providence*, 1700. The harbor of Nassau (bottom left) was used as a supply base for salvaging the *Maravillas*. Photo: Library of Congress, No. 74692182.



to find the remains comprising “piles of wood and broken boards.” The galleon’s setting in shallow waters, and flanked by reefs, made it susceptible to pounding by storm waves and powerful currents. The upper hull had begun its rapid trajectory of collapse and dispersal.

The six frigates dispatched to the wreck site, with a capacity of up to 100 tons for the largest ship, were accompanied by infantry, weapons and 40 divers with instruments required for underwater salvage.

Whether these took the form of drags, grapnels and rope lines or a dive bell is not specified. The squadron was led by Captain Juan de Somovilla Tejada, with the *Nuestra Señora de la Concepción y San Antonio* as *capitana*, and included Captain Gaspar de los Reyes, the assistant pilot who survived the sinking of the *Maravillas*.⁹

By June 19, 1656, the salvors were fishing the wreck at a depth of six fathoms (32 feet) using Native American and African divers. The hull was “found to be in one piece and structurally intact from the keel to the upper decks. Only the poop and part of the main deck had separated from the lower hull and drifted away.” However, the quarterdeck was missing in the stern and decking had collapsed onto the ballast.¹⁰

Forty-one guns could be spotted “among the jumble of broken timbers and other wreckage,” as well as many silver bars.¹¹ Overall, the wreck took the form of “a huge jumbled pile of rib timbers, frames and *barraganetes* [upper timbers].” Boxes were discovered fallen outside the hull containing rotten clothes, silver disks (contraband), three sheets of silver, a fine silver cone, 20 plates and other pieces of silver, all

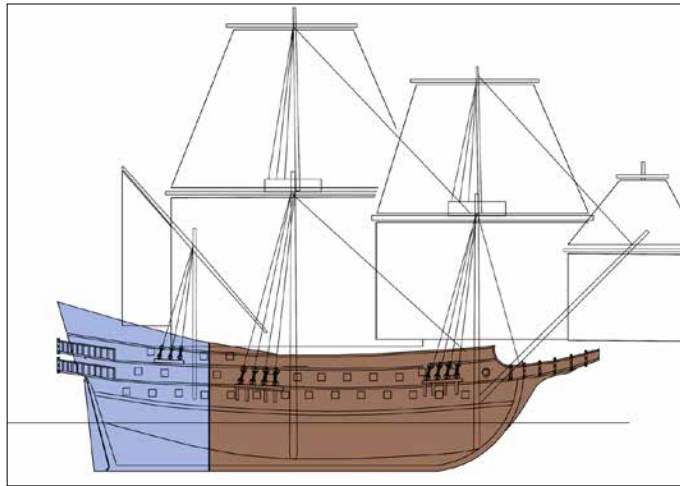


Fig. 4. Reconstruction of the *Maravillas*, highlighting in blue the quarterdeck in the stern described in historical sources as lost in the sinking of January 1656. Photo: © Allen Exploration.

dented, and a broken crate filled with 1,750 silver coins some distance away.¹²

Over the course of 13 days and 21 dives, the salvors “very easily” recovered 447,146 *pesos* of treasure, including more than 300 silver bars, silver discs, boxes full of silver coins, many from Mexico, worked and dented silverware, silver *piñas* (cones), as well as rotten clothing.¹³ So much silver filled Somovilla Tejada’s frigate that he was forced to jettison his own ship’s ballast. Eventually a storm pushed the salvors off station with a haul of 13.5 metric tons of treasure valued at 477,146 *pesos*. Three of the six salvage ships lost their anchors, adding to the site’s archaeological complexity.¹⁴

Somovilla Tejada’s report that his treasure was recovered “without touching the main strong room, as it remained locked and was inaccessible,” inspired more industry.¹⁵ Further salvage was attempted by Don Juan de Posada in 1656,¹⁶ before Pedro Zapata, the Governor of Cartagena, sent Juan Ochoa de Ocampo to join Somovilla on the wreck of the *Maravillas* in May 1657, alongside Capitan Joseph de Iriate. The *Nuestra Señora de Balvaneda* served as the squadron *capitana*,¹⁷ and the *Nuestra Señora de Atocha* the expedition *almirante*.

The expedition dived the site from June 18-29, only to find the wreck lashed by strong currents and the large starboard hatch immovable and covered by large ballast stones, jagged timbers and artillery. Ochoa still recovered 91 silver bars and goods worth 146,000 *pesos*.¹⁸

The divers could see the forward storeroom containing leather and a pile of silver bars but could not access it. Space

Fig. 5. Carl & Gigi Allen examine a gold chain, a personal belonging shipped on the *Maravillas*. Photo: © Allen Exploration.



Table 1. Summary of historical salvage expeditions to the wreck of the *Maravillas*, 1656-1683 (from AllenX research & Horner, 1999: 182-84).

| YEAR | SALVORS | TREASURE RECOVERED | VALUE (PESOS) |
|-----------|--|--|---------------|
| 1656 | Juan de Somovilla Tejada & Gaspar de Reyes | 300 large bars; 17 <i>piñas</i> ; 100,000 pieces of eight; 405 <i>castellanos</i> of gold; 1 bronze cannon; over 136 large & small silver plates, many damaged & dented; 15 candlesticks, tacks, jugs; 23 worked silverware; 35 worked silverware; silver pot; silver wick trimmer; 18 silver spoons; 20 silver forks; rotten cacao; box damaged carpentry tools ¹⁹ | 447,146 |
| 1656 | Juan de Posadas Vergara | Worked silver | 210 |
| 1656 | Captain Lockyer (Bermuda) | ----- | ----- |
| 1656-1657 | Juan de Posadas ²⁰ | ----- | ----- |
| 1657 | Juan de Ochoa y Campo | 91 silver bars, worked silver in 2 chests, silver coins | 146,000 |
| 1657 | Josef de Yriarte | Hundreds large & small silver & gold bars; 24 cannon | 1,500,000 |
| 1657 | Juan de Somovilla Tejada & Gaspar de Reyes | Silver: 160 large bars & 105 small bars; 60 <i>piñas</i> ; 50,000 pieces of eight; worked silver; 1 cannon | 170,000 |
| 1658 | Juan de Somovilla Tejada & Gaspar de Reyes | Silver: 38 large & 27 small bars; 12 <i>piñas</i> ; worked silver; 12 cannon | 53,000 |
| 1658 | Nicolas Estenes de Carmentas ²¹ | (Heavy sand) | 0 |
| 1666 | Marcos de Luzio | Small silver bars & worked silver; 1 bronze cannon; 28 pounds of cannonballs, ship parts ²² | 1,580 |
| 1668 | Dutchmen from St. Augustine | ----- | ----- |
| 1676 | Martin de Melgar | Silver: 24 large & 10 small bars; 2 <i>piñas</i> ; 93 silver plates & worked silver | 30,208 |
| 1677 | Martin de Melgar | Silver : 68 large & 25 small bars; 8.5 <i>piñas</i> ; 1,254 worn silver coins; worked silver | 55,000 |
| 1678 | Martin de Melgar | Silver: 46 large & 178 small bars; corroded coins; worked silver; 2 bronze cannon; gold rose ²³ | 68,223 |
| 1679 | Martin de Melgar | Melgar killed; treasure stolen | ----- |
| 1679 | French pirates | ----- | 200,000 |
| 1680 | Esteban de Verroa | Substantial silver; 4 <i>castellanos</i> of gold; 2 bronze cannon ²⁴ | 67,534 |
| 1681 | Bermuda “wrackers” | ----- | 1,000 |
| 1681 | Spanish expedition (Havana) | Silver bars & plate | 82,600 |
| 1682 | English salvors from Nassau & Bermuda | 30 silver bars; corroded coins; worked silver | 50,000 |
| 1683 | New England sea captains | 1 bar; worked silver | 100,000 |

was tight to work: the divers could only push half their bodies through the wreckage. The team had not brought appropriate equipment to lift the 41 guns they counted underwater. Iron spikes and nails wounded many divers. Even by hooking a grapnel to the hatch, “locked tightly,” and using a ship’s winch to try and pull it off, the wood refused to move. An enslaved diver died trying to re-tie the grapnel hook for a second attempt. De Ocampo’s later attempt to blow the hold with an underwater bomb made of gunpowder, packed into a wooden cylinder and roped up to an arquebus gun barrel, failed. The site was abandoned in a storm. At the time, the hull was described as intact, except at the bow, although the stern was completely closed in (covered up) and the forward, amidships and aft strong rooms still tightly locked.²⁵

In May 1657, Juan de Somavilla was preparing his second assault on the wreck and hiring 35 highly proficient pearl divers at the island of Margarita in Venezuela (Fig. 2), mostly indigenous people from Goajira in Colombia, who joined him on the salvage ship the *Madama do Brasil*. The squadron included the frigates *Panito*, *San Antonio* and *Dragón*.

By then, having conveniently failed to rendezvous with Captain Somovilla, Joseph de Iriarte was back on-site enjoying flat seas. Buckets lowered by lines were lifted full of thousands of *pesos*. Dozens of silver bars were tied with lines underwater and pulled to the surface. When de Iriarte heard that Somovilla was approaching the wreck from Grand Bahama, he lifted anchor and sped off to Cartagena with 1.5 million salvaged *pesos*. Another 120,000 *pesos* in silver and a box

of gold bars were stowed in a second ship. Twenty-four cannon were recovered.²⁶

Somovilla took over where his renegade partner left off, also making the most of perfect conditions and slack tide. By July 1657 the Spanish salvor observed how everything left of the ship had been carried away by the sea and currents.²⁷ In other words, the galleon's three-dimensionality seems to have been extensively flattened and partly washed away.²⁸ Somovilla was further frustrated by the wreckage having become covered by sand after a recent storm, which again suggests that after a year and a half of submergence the wreck had destabilized into a low-lying mound, with all remains above the hold collapsed and largely scattered.

Over 15 days, Somovilla's team lifted 160 large silver bars, 105 small and medium bars, 60 silver *piñas* cones, 50,000 pieces of eight, dishes, wine goblets and other silver dinner sets relocated to the hold of the *Madama do Brasil*.²⁹ The good luck did not hold. A fierce gale came out of nowhere on August 18, 1657, first from the southwest, before turning to the northwest. The *San Antonio* lost its anchors and was wrecked on reefs at the head of the Mimbres, a region which has equated to the central western side of the Little Bahama Bank since at least 1650, with Memory Rock at its center. Thomas Jeffrey's map of 1771 labels a "Safe Entrance" onto the bank, and it would be tempting to tentatively identify this point as the head.³⁰ Both the *Dragón* and *Panito* broke to pieces on the rocks off southern Grand Bahama. The *Madama do Brasil* was "blown unmercifully to only God knows where," wrote Somovilla. On August 22, it broke its rudder and the 400-ton frigate's seams broke open off Gorda Cay to the southwest of the Abaco Islands. The hull shattered to pieces and "Most of the treasure slid from the cracked and splintered hull into the crevices of the reef."³¹

The survivors of the *Madama do Brasil* camped on the shore, salvaging whatever they could from the now thrice wrecked cargo. Over a week they saved 130 large

silver bars, 150 small and medium bars and silverware. Just 500 to 600 pieces of eight from the 15 chests holding 30,000 *pesos*, scattered across the seabed, were saved. While Somovilla prayed for salvation after he dispatched some of his crew to Havana on the *Madama do Brasil's* boat, the Governor of Eleuthera heard word of the wreck and sent a team of his own salvors to Gorda Cay. The Spanish survivors fled when the English fired their muskets, leaving two of the expedition's Native American divers to lead the attackers to the wreck and help them salvage even greater treasure. A second dive camp was set up at Sandy Point. After three weeks fishing the *Madama do Brasil*, £2,600 of silver was divided at St. George's Cay (Spanish Wells), 50 miles to the southeast.³² The alluring tale of the sinking of the great treasure ship and its salvage boats was out in the open.

Loose-lipped Spanish sailors who worked on the 1656 salvage had landed in Bermuda and shared the story of the recovery with their hosts, even drawing a map of where the *Maravillas* went down. Equipped with this god-send, the Governor of Bermuda commissioned Captain Richard Lockyer to dive the wreck from his salvage ship the *Discovery*, accompanied by a local team led by William Coxen.³³

Back on the *Maravillas* the recovery efforts continued in 1658 when Nicolas Estenes de Carmentas, the Capitan de Artilleria for St.

Augustine in La Florida, was dispatched to the wreck by the town's governor on the *Nuestra Señora Del Rosario*. Despite locating the site on August 2, 1658, the captain was unable to complete meaningful work due to heavy sand cover and bad weather.³⁴

In June 1658, Juan de Somavilla Tejeda and Gaspar de los Reyes, having been rescued by their crew, returned from Havana and were back on the wreck. They dug up a cache of treasure that Somavilla had buried at Gorda Cay to stop the English stealing it, and then fished up bronze guns from the *Madama do Brasil*. By July 3, another 12 bronze guns had been recovered from the *Maravillas*, as



Fig. 6. An intact 'olive' jar recovered from the *Maravillas*. Photo: © Allen Exploration.

well as 53,000 more *pesos*. Even though Somavilla “extracted much of the ballast and sand on the hull,” the rest of the treasure was deeply buried under sediments.³⁵

3. The 1660s into the 1680s

Several years later, the military engineer Don Marcos de Luzio, owner of the frigate the *Nuestra Señora de Aransas y Las Animas*, twice tried his luck in 1666, working once out of St. Augustine and from Havana.³⁶ Luzio found that many silver bars had worked their way into the sand and even settled below the ballast.³⁷ His team recovered just 298 *marcos*, one ounce of silver and a bronze gun of 35 *quintales*, about 1,740 pounds.³⁸

Martin de Melgar, the next heavyweight salvor of the *Maravillas* after Somavilla, led extensive, life-changing dives between 1676 and 1681. In March 1676 his team noted five cannon left underwater and much silver piled in a group in the hull, suggesting to them that a strong room still survived undisturbed. Reports assert that de Melgar “found the hull” and that the poop castle had broken off and many deck timbers rotted away. By now the silver coins immersed underwater for two decades were coral-encrusted. Fifteen small silver plates recovered by the *Machanga* in June 1677, which had sailed from Havana,³⁹ were similarly corroded and two silver jugs “very worn and corroded.” The site had taken the form of “magnificent marine growths of many colors now decorating the grave of Don Matias de Orellana, and coral covers what is left.”

De Melgar had difficulties understanding what his salvors saw on the seabed and concluded that the power of the current running through the reef had caused part of the wreck to move. Seemingly in a shifted section of the



Fig. 7. A tobacco pipe found along the *Maravillas* scatter trail & believed to have been used by historical salvors in the 1680s. Photo: © Allen Exploration.

Fig. 8. A glass wine bottle found along the *Maravillas* scatter trail, perhaps once enjoyed used by historical salvors in the 1680s. Photo: © Allen Exploration.



wreck, the divers found what they described as a small cave formed by coral and sea growth around the wreckage, tunneled out by the action of the currents. Inside lay small silver plates and clumps of silver coins.⁴⁰ The feature could well have been coral and other bioclastic accretions formed over sections of wreckage.

Martin de Melgar’s efforts of 1676-1679 salvaged 158,461 *pesos* over a period of four years and five months. Although his frigate was armed with 30 pieces of artillery, 14 *pedreros* and 70 *escopetas* (muskets),⁴¹ the salvor paid the ultimate price for his endeavor in 1679 when two French sloops attacked him and blew up his ship’s powder magazine, killing de Melgar and 36 of his crew.⁴² The tough Melgar family refused to give up, however. As late as 1688, Juan y Joseph de Melgar petitioned to be allowed to search for the *Maravillas* in the Canal de Bahama.⁴³

4. English & Americas’ Colonial Wreckers

By the early 1680s, Spanish officials seemingly concluded that the wreck of the *Maravillas* was either yielding too few returns or was too broken up and heavily buried in sand to justify the cost and risks of future salvage operations. At this stage, English and colonial wreckers from New England started trying their luck (Figs. 7-8). The Bahamas islands were considered in 1682 to be “barren and good for little, frequented by only a few straggling people who receive such as come to dive for silver in a galleon wrecked on that coast.”⁴⁴ A year later, New Providence was described as “the only settled place by the English where the vessels and the men that come to recover the Spanish wrecks in the

Bahamas are refreshed. The people of Providence number about four hundred men that bear arms, and half as many women, and have got a considerable treasure out of the deep in ‘pigs and sows of silver,’ as they are termed.”⁴⁵

The fishing of the *Maravillas* was thus the prime mover behind the development of Charles

Town, later Nassau, in New Providence (Fig. 3) as the main base for Americas’ wreckers and, in turn, for the rise of the pirates’ republic on the island.

Salvors of Spanish treasures included English pirate hunters like Captain Thomas Paine, who joined forces in the summer of 1683 with Captain Conway Woolley, Captain Markham, John Cornelison, a commander of a brigantine from New York, and Brashaw from a French privateer “to fish for silver from a Spanish wreck.”⁴⁶

At least 30 divers worked the *Maravillas*, including Captain Peres Savage’s crew, which used six “drudges” (dredges) to move debris and rotten timbers. His salvage provides rare detail about the destructive methods applied by the 17th-century wreckers. A Spanish team had recently brought up around £20,000 in money, plate and bullion from the *Maravillas* and hopes were high. “Ten paths were made by dragging from stern to stern athwart her,” Savage wrote, “and found but thirty sowes of silver in all. I believe there is very little left in her, for I took as much time as a man possibly could, bringing up several pieces of her keelson and some of her hooks,” as well as “some of her transums abaft.”⁴⁷

Most famous of all was William Phips, who cut his teeth on the Bahama Banks in March and April 1684 before striking it rich on the *Nuestra Señora de la Concepción*, lost off northern Hispaniola (the Dominican Republic) in 1641. Despite



Fig. 9. High-status gold and silver personal belongings and silver coins from the *Maravillas* discovered by AllenX along the wreck’s scatter trail. Photo: © Allen Exploration.

rumors that Phips fished up 20,000 pounds of gold and silver from the Bocas de Isla de Bahama, the *Maravillas* was probably mistaken for the more bountiful northern wreck in Hispaniola. Like the *Resolution* that spent ten months fishing

the *Maravillas* and recovered very little from the wreck, Phips most probably secured little of value, perhaps a single silver bar at best.⁴⁸ This scenario seems plausible in light of his crew mutinying and demanding their commander turn pirate with them or be castaway on a remote island in The Bahamas.⁴⁹ To prepare for the salvage, Phips had charged Captain Warren of the *Good Intent* to “find divers a diving tub and all other instruments fit for the voyage” in November 1683. This may refer to the ‘Bermuda Tub’, first invented by the pirate Richard Norwood, which was little more sophisticated than an oversized wine casket, inverted and weighted around its edges.⁵⁰

Still the dream of shipwrecked treasure lived on in the imagination. At the end of the 1680s, the English merchant Philip Ford successfully petitioned for the 80-ton *Elizabeth*, under the command of Thomas Baker, to salvage a wreck near the islands or shoals of The Bahamas in July 1687.⁵¹

5. Conclusion: Sequencing the *Maravillas*’ Salvage

In summary, over three decades from 1656 to at least 1683 the wreck of the *Maravillas* was heavily impacted by salvors handling crudely effective equipment. What exact tools were used is largely mute within the early historical sources. Adapting methods developed for the extraction of oysters

and pearls off the Spanish-controlled islands of Margarita and Cubagua in Venezuela, it can be assumed that the wreck of the *Maravillas* was extensively disturbed within this time frame.

In the 1620s, for instance, Tomás and Nicolás de Cordona, Venetians from Seville, promised to bring their oyster-harvesting technology to bear on the 1622 fleet lost off the Florida Keys, which included grapnel anchors to hook and break apart wreckage, drag nets similar to modern trawler nets and seabed grabs.⁵² The use of comparable equipment on the *Maravillas* would have broken up the hull, allowing sections and individual timbers to float away.

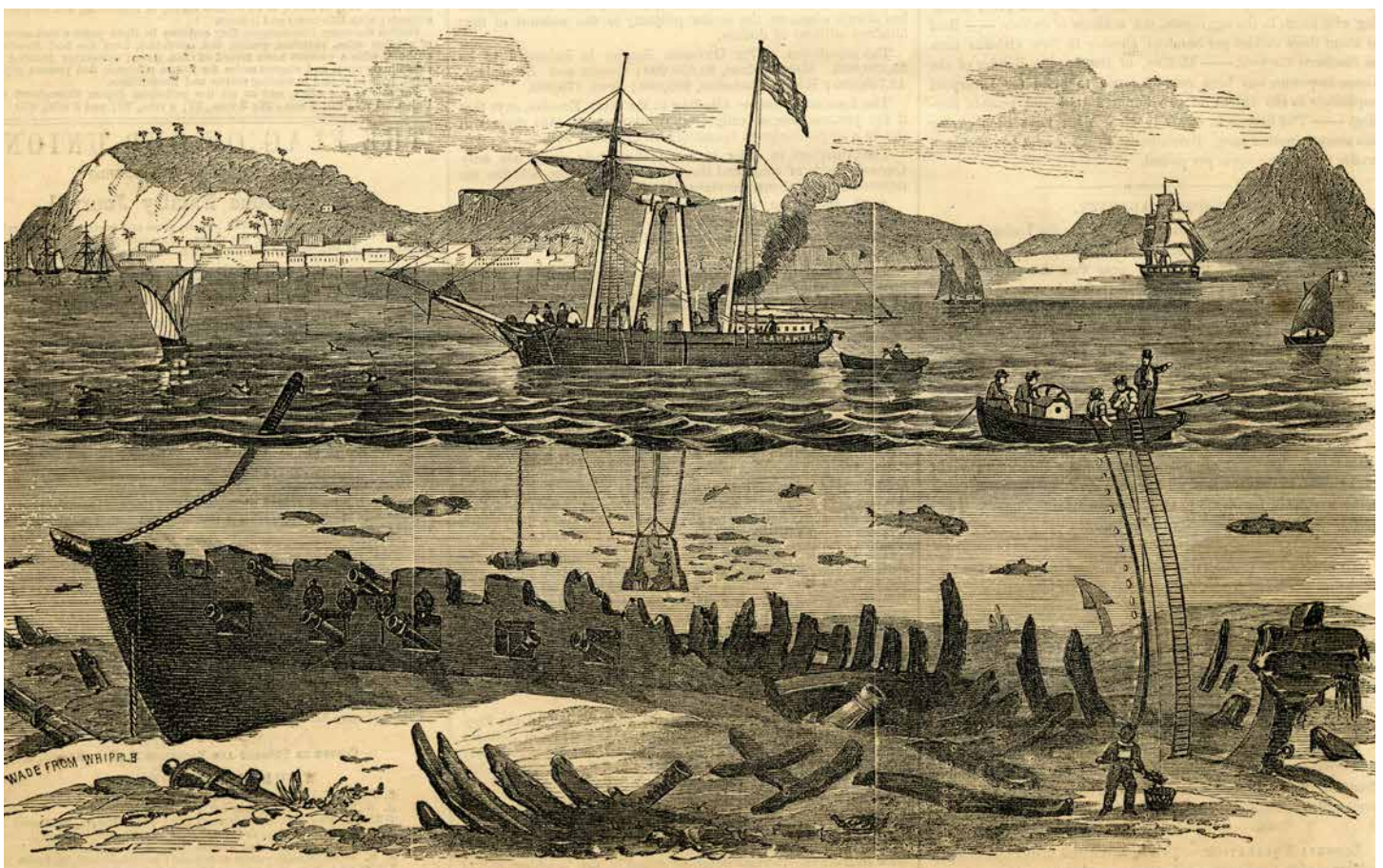
The early use of explosives seems likely, too, based on de Ocampo's attempt to blow the hold in 1657. The 30 divers who spent six months using "drudges" (dredges) to clear ten paths through the wreckage in 1683, pulling up sections of the keelson and transom, clearly destructively impacted the structural remains.

The impacts on the wreck of the *Maravillas* in these years can be reconstructed as having followed the ensuing sequence of events. Upper sections of the ship broke apart at the time of the galleon's sinking, including the dislocation of the quarterdeck in the stern (Fig. 4). This exposed multiple interior spaces, spilling planking and personal belongings to the sides of the hull and in a wider trajectory. The wreck's Artifact Scatter Trail (AST) had started to form, propelled by the dominant tide, wave and current regime.

Recovery of exposed surface cargo commenced immediately. Loose hull remains, rigging and non-valuable materials would have been dumped off-site with little ceremony by hand and using grab technology. The large-scale stripping of the wreck's material culture was underway. The presence of loose, decontextualized wreckage accelerated and, in turn, increasingly freed finds flowed along the artifact scatter zone. The evolution of the wreck's site formation in relation to the historical salvage is examined in a separate issue of *Ocean Dispatches*.⁵³

Fig. 10. No contemporary illustration shows the salvage of the *Maravillas* between 1656 and the 1680s.

This early engraving of 1786 shows a comparative team of salvors & their dive bell on the wreck of the 64-gun Spanish warship *San Pedro de Alcantara*, lost near Peniche in Portugal. Photo: Alamy, Inv. No. D9H6BM.



Acknowledgements

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Notes

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12. Horner, 1999: 135.

13. AGI Santo Domingo 166, folio 740f; AGI Indiferente, 2574, p. 355.

14. Horner, 1999: 136, 137.

15. Horner, 1999: 137.

16. AGI Escribanía 103b, diario 178.

17. AGI Contaduria 1155, diario 65.

18. AGI Escribanía, 634B, p. 281.

19. AGI Santo Domingo 166, folio 740.

20. AGI Escribanía 103b, diario 245.

21. AGI Santo Domingo 225, diario 84; AGI Santo Domingo 848, diario 226.

22. AGI Santo Domingo 225, diario 84.

23. AGI Escribanía 1087B, diario 234.

24. AGI Santo Domingo 463, diario 293.

25. Horner, 1999: 141, 142, 143.

26. Horner, 1999: 144, 145.

27. AGI Contaduria 1155, diario 65.

28. AGI Contaduria 1155, diario 69.

29. Horner, 1999: 145.

Allen Exploration dive team. Various feedback on the contents of this article, including from James Jenney, is much appreciated. We note that various Spanish texts consulted have been translated in different and often inconsistent ways, especially when referring to technical ship construction terms.

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31. Horner, 1999: 145-48.

32. Horner, 1999: 148-49; AGI Indiferente 3179B, (1) 1661, folios 1 51; AGI Contaduria 1155, diario 69.

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