



This aerial image of Salt Cay reveals views of its historic Buildings and salt ponds.

# Going Under

Searching lost wrecks on Salt Cay.

Story and Photos By Dr. Joost Morsink and Dr. Ruud Stelten

South of Grand Turk, a small and sleepy island rests in the Atlantic Ocean: Salt Cay. With approximately 90 inhabitants on 2.6 square miles, this is the least populated of the main inhabited islands in the Turks & Caicos Islands. Tourists often bypass the island in favor of Grand Turk, Providenciales or other Caribbean islands, but the lucky ones who choose to visit Salt Cay discover unmatched tranquility, superb diving and whale watching, and beautiful and remote beaches.



From the 17th to the mid-20th centuries, the island was not bypassed. In fact, Bermudians sailed their ships over 800 miles every year to visit Salt Cay for its salt. Historically, salt was considered “white gold” because in the absence of refrigeration, salt provided one of the very few ways to preserve food. The interior of Salt Cay consisted of a large natural salt pan and in combination with strong tradewinds, hot days and little precipitation, Salt Cay culminated into an ideal environment for natural production of this precious product. Entrepreneurs as they were, the Bermudians targeted this island for economic production, building salt storage facilities along the shore and creating salt ponds with wind-powered pumps to increase production. The profitable salt industry left a mark on the island.

In Spring 2019, we conducted archaeological field research on Salt Cay. Intrigued by the importance of this relatively common product, our intention was to create an inventory of archaeological sites on the island. In addition

to the island’s visible remains, such as the houses and the salt pans, many archaeological sites have been obscured by the water. Underwater archaeological remains are testament to the importance of the maritime world to this island.

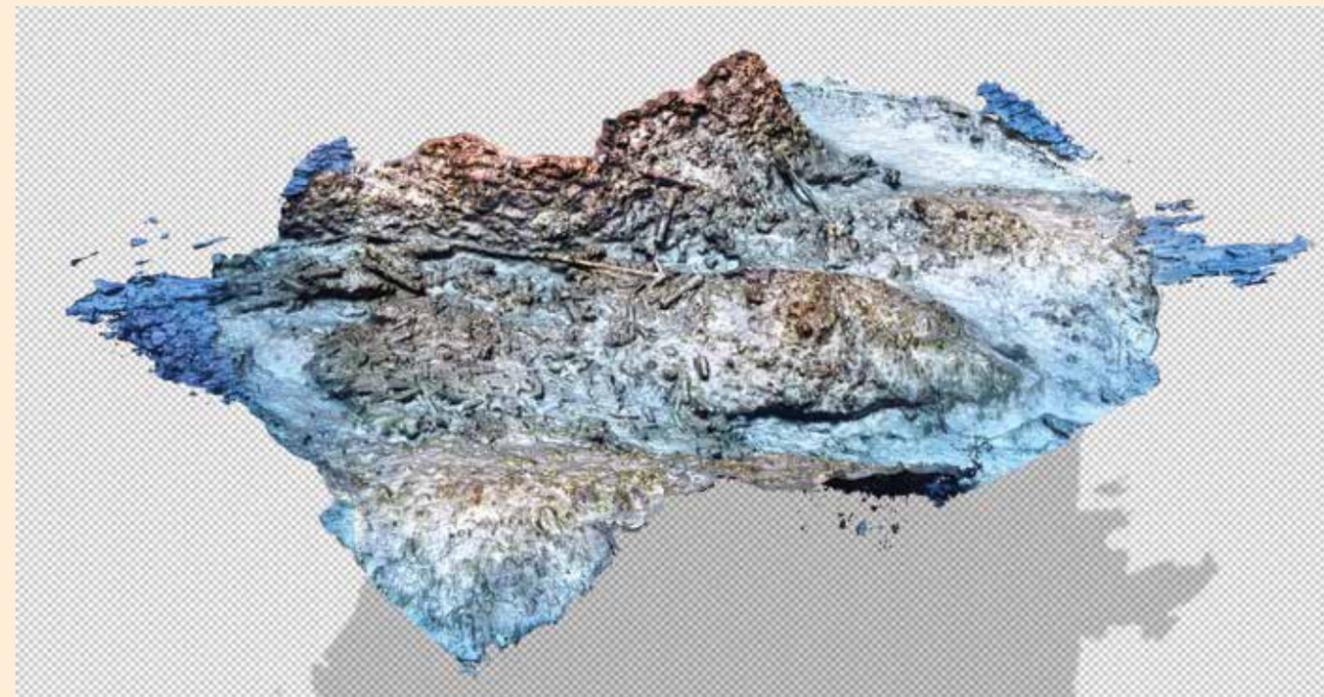
Surrounded by the sea, Salt Cay functioned as a hub. To move people to the island, export salt and connect the island to a wider Caribbean context, a maritime focus was a must. Smaller vessels would come and go along the coast, moving goods on and off the island. Larger ships would set sail and deliver the salt to other Caribbean islands, the United States and even Europe. Rough seas, bad material, human error or just bad luck sometimes interfered, and vessels would not make it to their destination. With the loss of wealth or even life, these events were significant in the past. Yet over time, not all wrecks are remembered and stories are forgotten. Our goal is to find material evidence of these events, find out what happened, and revive these forgotten episodes.



Dr. Ruud Stelten measures the North Point Wreck on Salt Cay. The ship is made of wood and its visible remains are approximately 33 feet long. Could it be the wreck of the *Gustavus*?



Dr. Joost Morsink examines the huge anchor from the wreck of the *Endymion*. Because the ship was 141 feet long, this size anchor was a necessity.



This 3D model of the *Endymion* allows researchers to study the wreck without going underwater. It also allows Museum visitors to enjoy the splendor of this “virtual wreck.”

As soon as we land on the island after a 45-minute boat trip from Grand Turk, we hear stories about a potential wreck on the north coast. Equipped with fins, snorkel, measuring tape, and camera, we set to explore this lead and quickly find the remains of a wooden ship. At only 20 feet deep, we can document the ship while freediving. The ship is made of wood and its visible remains are approximately 33 feet long, situated along a shallow reef to the west. It is very possible that these reefs caused the vessel to sink. Other parts of the ship are still buried underneath the white sand.

In the tropical waters of the Caribbean, it is unusual to see wood: Naval Shipworm, *Teredo navalis*, often gets a hold before archaeologists get a chance. As the shipwreck is shallow, many of the associated artifacts were likely salvaged after the ship went down. The lack of artifacts hinders our research and make ship identification difficult. Yet, looking through old naval logbooks and archives, there is a mention of *Gustavus*. This ship planned to visit Grand Turk on January, 8, 1855 to collect salt. During bad weather, *Gustavus* hit the cliffs, lost its navigational abilities, and slowly drifted to the north coast of Salt Cay and sank. Additional research is necessary to identify the wreck as the *Gustavus*, for example by dating the wood using tree ring analysis, but the first

step is made.

Another known wreck is approximately 16 miles south of Salt Cay: the HMS *Endymion*. This British man-of-war sank on a shallow reef in 1790, about 11 years after it was built. On a small skiff, the ride is about two hours when conditions are ideal. In rougher seas, it is impossible to navigate these waters. Anchoring near the site is dangerous and there is a significant chance of history repeating itself by wrecking the boat on Endymion Rock, the reef named after the wreck. If two hours on a small boat sounds less than exciting, plan the trip during the whale season. We crossed paths with numerous whales with calves, starting to get ready for their trip north.

Even in calm waters, it is difficult to anchor the ship close to the wreck and away from the reef. But as soon as we enter the water, the wreck shows itself. No wood this time; the Naval Shipworm had over two centuries to eat its way through. Metal, glass, ceramic and stone objects remain on the sea floor. Large boulders, which were used as ballast, signify where the hull of the ship went down. Of the 44 cannons on board, the crew was only able to salvage one after the *Endymion* sank. Piled up, scattered around, and some single outliers, the cannons are clearly visible across the site. Other visible objects are large chain links that cross the entire site and multiple anchors.



One of the *Endymion* anchors was over 16.5 feet long, one of the largest anchors we have ever seen! At 141 feet, *Endymion* was of significant size for its time, making these large anchors indispensable.

In the National Maritime Museum in Greenwich, England, the original logbook of the HMS *Endymion* can be found. The logbook details all the travels, but also the last days of the ship's existence before it sank south of Salt Cay. On August 28, 1790, the ship hits a then-unknown reef. Within an hour, five feet of water entered the ship and Captain Woodruff quickly understands that the ship is not going to make it. Leaving a couple of sailors behind, the crew rows sloops to Grand Turk looking for help. The next day, all sailors and as much of the ship's contents as possible were saved. On August 30, the captain leaves the ship right before it is completely submerged. To remedy this incredible loss, the crew buys over 60 gallons of rum as soon as they land in Grand Turk!

By taking hundreds of photos with about 70% overlap in every photo, we document the majority of the wreck. Using photogrammetry, it is possible to translate these photos into a digital 3D model of site. As easy as it sounds, the reality is different. For an optimal product, the photos need to be taken on a constant and even depth, the light needs to be ideal with no shadows showing, the colors need to be close to the natural colors (anyone who has ever taken a photograph under water knows how difficult this can be), and no moving objects, such as fish, can obscure the artifacts.

The 3D model serves multiple purposes. From the model, the wreck can be studied without the need to go back and dive it again. Measurements can be taken, artifacts can be counted, maps can be made without needing a single scuba tank! Secondly, the model provides a baseline for long term management questions. Large storms or other factors could affect the quality of the wreck, moving and breaking artifacts. By comparing the model from 2019, the degree of impact can be measured. Finally, the model serves an educational purpose. As said, the wreck is difficult to visit. Its remote location and the need of very calm conditions before one can dive there limits how many people can actually see the wreck. The model will allow more people to visit the wreck and enjoy its splendor.

While diving the *Endymion*, we follow one of the large chains which leads to the *General Pershing*. This wooden



This adorno was recently found on Cotton Cay.

vessel was powered by engines, which can be found near the reef. In 1921, the three-year old and 266 foot-long vessel wrecked on the same reef as the *Endymion*. With two wrecks here, how many more unidentified wrecks are there still to be found on these reefs?

Along the west coast of Salt Cay, multiple smaller vessels wrecked too. A local inhabitant shows us a location on the south coast where he found a 16th-century anchor and multiple bronze nails, which all indicate another lost ship. Rough seas and little time prohibited a detailed assessment of the location, but future research will show what other ships were lost in the salt trade.

The Europeans were not the first people on the island. Prior to Columbus, the Islands were first colonized by people from Hispaniola. Later, Lucayan people moved into the region from the central Bahamas. Evidence of the populations can be found. Two years prior to our 2019 visit, Ruud Stelten identified Lucayan pottery on Salt Cay's east coast. Hurricane Maria, however, either destroyed or buried the site and no artifacts could be found during our most recent visit. We cover large sections of the island in our week there, but we were unable to find any prehistoric artifacts. Possibly, the prehistoric village was located where the historic occupation occurred and all evidence is obscured by buildings and roads.



A quick trip to Cotton Cay, a small uninhabited cay north of Salt Cay, shows that native people were in the region. Within two minutes of landing on the beach, Ruud and I identify multiple pieces of pottery, some with volcanic sand in them. As the Turks & Caicos Islands are not volcanic, these pottery sherds were likely imported from Hispaniola. Typically, these sherds were imported between AD 700 and 1500. Pottery with burned shell, rather than volcanic sand, was also identified along the beach. This pottery is typical of Lucayan sites in the region and first occur after AD 1100. Excavations are needed to determine if the site is the product of multiple short term visits or one long term occupation.

Along the northern coast, another scatter of Lucayan pottery and shell was found. The color of the sand was also darker than in other places on the island, suggesting that people might have altered the local composition of the soil by living there. The second site was located on a ridge, next to two natural salt ponds. Elsewhere in the Islands, prehistoric sites were found next to salt ponds and prehistoric people were likely exploiting this resource as well. Maybe Lucayan people set the stage for exploiting salt in the Turks & Caicos Islands, introducing the resource and the salt pans to the Europeans who arrived later.

Our research has just started. Our goal is to understand the exploitation of salt in the Turks & Caicos Islands throughout history. By focusing on prehistoric and historic salt production and exchange, it might be possible to provide a new perspective on the Islands' past. Rather than emphasizing the break and differences between prehistoric and historic times, there might be a lot of similarities and continuity. Stay tuned! ✨

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The White House on Salt Cay is still owned by descendants of Daniel Harriott. The Harriott family, along with other families who could, took in *Vineland* survivors until they could be transported back to the United States.

JOOST MOERSINK

# TCI in WWII

## Survivors of U-Boats: *Vineland* in 1942, Part II

By Captain Eric Wiberg

In the Fall 2019 issue of *Astrolabe*, the author detailed the sinking of the Canadian dry-bulk ship *Vineland*, on April 20, 1942 by the German submarine U-154 while it was roughly 90 miles north of North Caicos. The survivors voyaged in three lifeboats until they were picked up by fishermen in the Caicos sloop *Emily Conway* and towed to Chalk Sound, Providenciales. The story continues as follows . . .



This image shows the *Vineland* at dock loading or discharging newsprint for the Liverpool Steamship Company of Canada. Note the temporary neutral Panama markings which followed her to the bottom.

*Vineland* survivors were initially taken to tiny Salt Cay by fishermen, and hosted by the leading Harriott family and in other homes for several days. After supplies became taxed the men were moved a short distance north, where they staying in guest houses awaiting a north-bound ship. Their erstwhile hosts, the Harriotts, accompanied them to Grand Turk to ensure their onward passage.

The Harriotts originally emigrated from Bermuda in the 1830s and with profits from salt harvests built the largest building on Salt Cay, wedged between the salt pans and the ocean. Named the White House, it still stands today. Family lore has been well kept by Georgina Dunn Belk. She shared family anecdotes about Captain Ralph Williams and the *Vineland* crew. Her aunt writes that “as children, we saw evidence of the torpedoing of ships by the German submarines when some of the survivors of a torpedoed merchant ship were brought to East Harbour by fishermen who discovered them drifting in lifeboats. Our family, along with other families who could, took them in until they could be transported back to the United States.” One of the *Vineland* survivors says that “on Grand Turk the women made clothes for some of us.”

Life on shore was bleak, but not as bad as for others surviving wartime winter in Canada: “Ships from the [Canadian] Maritimes had even poorer food to feed the crew and for them a meal ashore at the White House, where [the hostess] would have a chicken killed for them as honored guests, was memorable.” The Islanders had become, by necessity, adept at scavenging the bounty of wartime submarine attacks. “Essentially, anything that floated ended up on a beach, and Turks Islanders would come to the door of the White House selling items they

had found including life boats, life rafts, oil drums, ropes and tarps, timber and furniture. But the most treasured finds were the crates of dried tinned food, so when large tins of white powder washed up the beach [we] brought it from the salvager. It has the appearance and consistency of porridge. Cooked and eaten for breakfast, it had the consistency of glue but was more or less edible.”

One of the Harriotts continues: “We had five seamen in our home from the sunken British merchant ship with supplies that left New York for South America to pick up raw rubber. The rescued men were picked up one afternoon by our fishermen. (Daddy told us later that the men were covered in oil and some were burned quite badly). Five of them were settled into our home after Cleo and I had gone to bed. We didn’t know about our guests until we came down the next morning for breakfast and there they were at the dining room table with my father and mother having their morning tea.” She continued: “Our torpedoed British seamen stayed with us and the other families four or five days until a ship came for them. We borrowed additional cots from family, and they took over our bedroom upstairs, and we moved into our parent’s room and slept on the floor.”

Presumably the officers stayed at the White House. Eight of the men were later accommodated at the Louise Ariza boarding house in Grand Turk. Osvaldo Ariza remembers that his mother “put up survivors there” and that “most were Canadian.” He remembers hearing that a young boy from the ship said he had been torpedoed three times, and that Captain Williams was fond of telling local school children that the “V” in *Vineland* stood for Victory. Another of Mrs. Ariza’s sons remembers one