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A Stolt tank container is providing vital wet storage for artefacts and timbers as marine archaeologists in Bermuda excavate the wreck of the 17th century English supply ship *Warwick*. **Dr Edward Harris**, Executive Director of the National Museum of Bermuda explains how the excavation provides an invaluable insight into Bermuda's maritime history.

Tank container helps pre

More than 390 years ago, in November 1619, a massive hurricane formed in the Atlantic. It threatened the fledgling Bermuda colony and all the ships anchored at the island's natural harbours.

One of these was the *Warwick*, an English supply ship destined for the colony of Jamestown, Virginia. The ship had, a few weeks previously, delivered Captain Nathaniel Butler, the newly elected Governor of Bermuda, and John Dutton, the new Bailiff of the Warwick Tribe, to the island.

The *Warwick's* captain was faced with a difficult and potentially menacing choice. He could depart prematurely and ride the storm out in the open ocean, or seek shelter in Castle Harbour and hope that the ship's moorings and tackle were stronger than the wind. Under Butler's orders, the crew

dropped anchor behind a tall cliff on the southern side of Castle Harbour and secured the ship.

On November 20, the powerful hurricane tore through Bermuda. At King's Anchorage, the *Warwick* broke free of all her moorings and was torn apart on the reef and rocks below the cliff. Some of her supplies were later rescued, and her cannons were raised and used to bolster the island's defences. The ship's loss was a devastating blow to her owner, Sir Robert Rich, the Earl of Warwick, as well as the Virginia and Somers Island Companies and individual investors.

In 2011, the *Warwick* has new stories to

tell. Underwater archaeologists from the National Museum of Bermuda are working with local businesses and volunteers to excavate scientifically the remains of the *Warwick* in Castle Harbour and shed new light on early 17th century shipping and shipbuilding.

Stolt-Nielsen Limited is one of the companies involved with this project and has donated a chemical tank container. After being cut in half, the tank container was placed in front of the Corange Conservation Laboratory, where it will serve as wet storage for oversized artefacts, including 16th and 17th century shipwreck timbers and other organic cultural objects awaiting conservation.

Since waterlogged artefacts have undergone considerable chemical and physical changes during centuries at the bottom of the ocean, they must be kept wet at all times to prevent shrinkage, distortion

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MAIN PICTURE: A view of the site of the *Warwick*, in Castle Harbour, Bermuda.

LEFT: A diver recording the timbers of the *Warwick*.
Photo courtesy of NMB

FACING PAGE, TOP: The Stolt tank container arrives at the National Museum of Bermuda.
Photo courtesy of NMB

FACING PAGE, CENTRE: Cut in half, the Stolt tank container used as a large wet storage facility at the National Museum of Bermuda.
Photo courtesy of NMB

FACING PAGE, BOTTOM: A site plan of excavated section of the hull of the *Warwick*.



and complete deterioration. Hence, it was of paramount importance for the museum to find stainless steel storage of adequate dimensions and strength, and the Stolt tank container was the answer.

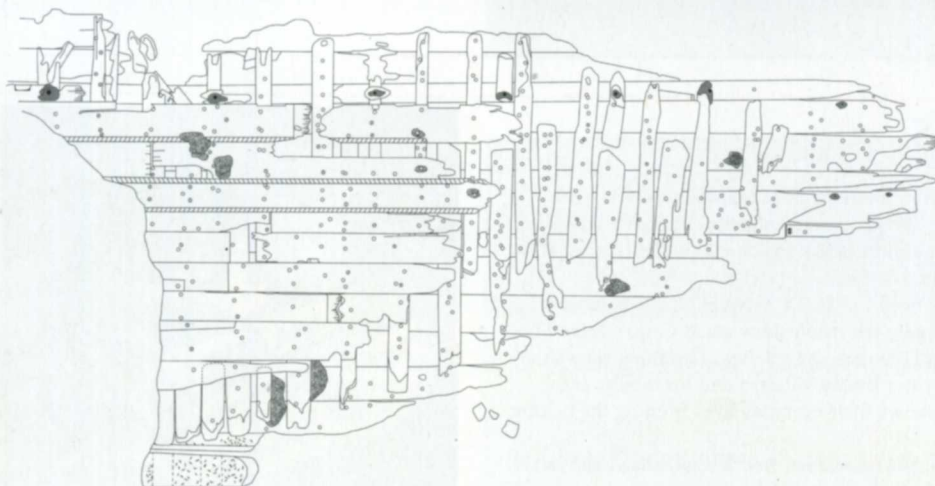
The *Warwick*, and ships like her, carried the financial interests of small businessmen and English investors. These ships of private

enterprise also carried the settlers that would permanently make their homes in Bermuda and the British American colonies. Despite the economic and social importance of these 'magazine' ships during the 1600s, the remains of *Warwick* represent the only such surviving example in the world. The *Warwick* ranks among such memorable

vessels as the Tudor warship *Mary Rose* (sank in 1545), the English-built *Sea Venture* (wrecked at Bermuda in 1609), and the Swedish warship *Vasa* (sank in 1628).

The extant structure of the *Warwick* represents the starboard hull, from the turn of the bilge to just above the gun deck. The ship's remains are helping nautical

serve Bermuda's heritage



archaeologists ask and answer important questions about 17th century ships, including how the entrepreneurs protected their vessels and investments from the ravages of *Teredo navalis* worms, the termites of the sea. Shipworms would infest a ship's hull, leaving it fragile and full of holes, and an infested ship could quickly break apart in a storm or against a reef. The excavation of the *Warwick* has shown that shipwrights built her hull from two separate layers of planking and then added a thin third layer of sacrificial planking to absorb the shipworm damage, thus extending the life, and profits, of the vessel.

Archaeological evidence suggests that the *Warwick* was built at a turning point in

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English ship design and construction. It has a unique place in both the history of shipbuilding and the social history of Bermuda. The ship's loss had a profound effect on the political career of Bermuda Governor Nathaniel Butler, as well as on the population and prosperity of the island. The ship is an iconic representation of the English business ventures that sailed between England, Bermuda and Jamestown, carrying colonists and supplies from Europe to the Americas and returning with cargoes such as tobacco.

With each season of archaeological work, the *Warwick* teaches us more about the island's history and of matters relating to North Atlantic shipping and trade in the early 1600s. This year, an international team of underwater archaeologists will conduct further studies of the unique remains of the *Warwick* and scholars from Sweden, the UK and the US will be involved.

The National Museum has expressed its considerable thanks to Stolt-Nielsen for contributing the stainless steel tank container - which has now taken the form of two large vats for the wet storage of artefacts and remains of the *Warwick*.