



# Phase II and Phase III Archaeological Database and Inventory

Site Number: 18DO497

Site Name: Nanticoke River Shipwreck

Prehistoric

Other name(s)

Historic

Unknown

Brief Description:

Late 18th-Early 19th century shipwreck

## Site Location and Environmental Data:

Maryland Archaeological Research Unit No. 3

SCS soil & sediment code

Latitude 38.4936

Longitude -75.8107

Physiographic province Eastern Shore Coastal P

Terrestrial site

Underwater site

Elevation m Site slope

Ethnobotany profile available  Maritime site

### Nearest Surface Water

Name (if any) Nanticoke River

#### Saltwater

Ocean

Estuary/tidal river

Tidewater/marsh

Minimum distance to water is 0 m

#### Freshwater

Stream/river

Swamp

Lake or pond

Spring

### Site setting

-Site Setting restricted

-Lat/Long accurate to within 1 sq. mile, user may need to make slight adjustments in mapping to account for sites near state/county lines or streams

### Topography

- Floodplain
- Hilltop/bluff
- Interior flat
- Upland flat
- Ridgetop
- Terrace
- Low terrace
- High terrace
- Rockshelter/cave
- Hillslope
- Unknown
- Other
- River bottom

### Ownership

- Private
- Federal
- State of MD
- Regional/county/city
- Unknown

## Temporal & Ethnic Contextual Data:

Paleoindian site

Woodland site

Archaic site

MD Adena

Early archaic

Early woodland

Middle archaic

Mid. woodland

Late archaic

Late woodland

Unknown prehistoric context

- Contact period site
- ca. 1820 - 1860
- ca. 1630 - 1675
- ca. 1860 - 1900
- ca. 1675 - 1720
- ca. 1900 - 1930
- ca. 1720 - 1780
- Post 1930
- ca. 1780 - 1820
- Unknown historic context
- Unknown context

### Ethnic Associations (historic only)

- Native American
- Asian American
- African American
- Unknown
- Anglo-American
- Other
- Hispanic

Y=Confirmed, P=Possible

## Site Function Contextual Data:

### Prehistoric

- Multi-component
- Village
- Hamlet
- Base camp
- Rockshelter/cave
- Earthen mound
- Cairn
- Burial area
- Misc. ceremonial
- Rock art
- Shell midden
- STU/lithic scatter
- Quarry/extraction
- Fish weir
- Production area
- Unknown
- Other context

### Historic

Urban/Rural? Rural

#### Domestic

- Homestead
- Farmstead
- Mansion
- Plantation
- Row/townhome
- Cellar
- Privy

#### Industrial

- Mining-related
- Quarry-related
- Mill
- Black/metalsmith
- Furnace/forge
- Other
- Transportation
- Canal-related
- Road/railroad
- Wharf/landing
- Maritime-related
- Bridge
- Ford
- Educational
- Commercial
- Trading post
- Store
- Tavern/inn

#### Military

- Battlefield
- Fortification
- Encampment

#### Townsite

- Church/mtg house
- Ch support bldg

#### Burial area

- Cemetery
- Sepulchre
- Isolated burial

#### Bldg or foundation

- Possible Structure

- Post-in-ground
- Frame-built
- Masonry
- Other structure
- Slave related
- Non-domestic agri
- Recreational
- Midden/dump
- Artifact scatter
- Spring or well
- Unknown
- Other context
- shipwreck

## Interpretive Sampling Data:

### Prehistoric context samples

Soil samples taken

Flotation samples taken

Other samples taken

### Historic context samples

Soil samples taken N

Flotation samples taken N

Other samples taken

Magnetometer, Side-Scan Sonar, dendrochronology, wood species



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## Diagnostic Artifact Data:

Projectile Point Types		
Clovis	<input type="text" value="0"/>	
Hardaway-Dalton	<input type="text" value="0"/>	
Palmer	<input type="text" value="0"/>	
Kirk (notch)	<input type="text" value="0"/>	
Kirk (stem)	<input type="text" value="0"/>	
Le Croy	<input type="text" value="0"/>	
Morrow Mntn	<input type="text" value="0"/>	
Guilford	<input type="text" value="0"/>	
Brewerton	<input type="text" value="0"/>	
Otter Creek	<input type="text" value="0"/>	
Koens-Crispin	<input type="text" value="0"/>	
Perkiomen	<input type="text" value="0"/>	
Susquehana	<input type="text" value="0"/>	
Vernon	<input type="text" value="0"/>	
Piscataway	<input type="text" value="0"/>	
Calvert	<input type="text" value="0"/>	
Selby Bay	<input type="text" value="0"/>	
Jacks Rf (notch)	<input type="text" value="0"/>	
Jacks Rf (pent)	<input type="text" value="0"/>	
Madison/Potomac	<input type="text" value="0"/>	
Levanna	<input type="text" value="0"/>	

## Prehistoric Sherd Types

Marcey Creek	<input type="text" value="0"/>	Popes Creek	<input type="text" value="0"/>	Shepard	<input type="text" value="0"/>	Keyser	<input type="text" value="0"/>
Dames Qtr	<input type="text" value="0"/>	Coulbourn	<input type="text" value="0"/>	Townsend	<input type="text" value="0"/>	Yeocomico	<input type="text" value="0"/>
Selden Island	<input type="text" value="0"/>	Watson	<input type="text" value="0"/>	Minguannan	<input type="text" value="0"/>	Monongahela	<input type="text" value="0"/>
Accokeek	<input type="text" value="0"/>	Mockley	<input type="text" value="0"/>	Sullivan Cove	<input type="text" value="0"/>	Susquehannock	<input type="text" value="0"/>
Wolfe Neck	<input type="text" value="0"/>	Clemson Island	<input type="text" value="0"/>	Shenks Ferry	<input type="text" value="0"/>		
Vinette	<input type="text" value="0"/>	Page	<input type="text" value="0"/>	Moyaone	<input type="text" value="0"/>		
				Potomac Crk	<input type="text" value="0"/>		

## Historic Sherd Types

<b>Earthenware</b>		Ironstone	<input type="text" value="0"/>	Staffordshire	<input type="text" value="0"/>	<b>Stoneware</b>	
Astbury	<input type="text" value="0"/>	Jackfield	<input type="text" value="0"/>	Tin Glazed	<input type="text" value="0"/>	English Brown	<input type="text" value="0"/>
Borderware	<input type="text" value="0"/>	Mn Mottled	<input type="text" value="0"/>	Whiteware	<input type="text" value="0"/>	Eng Dry-bodied	<input type="text" value="0"/>
Buckley	<input type="text" value="0"/>	North Devon	<input type="text" value="0"/>	<b>Porcelain</b>	<input type="text" value="0"/>	Nottingham	<input type="text" value="0"/>
Creamware	<input type="text" value="0"/>	Pearlware	<input type="text" value="0"/>			Rhenish	<input type="text" value="0"/>
						Wt Salt-glazed	<input type="text" value="0"/>

All quantities exact or estimated minimal counts

## Other Artifact & Feature Types:

Prehistoric Artifacts			
Flaked stone	<input type="text" value="0"/>	Other fired clay	<input type="text" value="0"/>
Ground stone	<input type="text" value="0"/>	Human remain(s)	<input type="checkbox"/>
Stone bowls	<input type="text" value="0"/>	Modified faunal	<input type="text" value="0"/>
Fire-cracked rock	<input type="text" value="0"/>	Unmod faunal	<input type="text" value="0"/>
Other lithics (all)	<input type="text" value="0"/>	Oyster shell	<input type="checkbox"/>
Ceramics (all)	<input type="text" value="0"/>	Floral material	<input type="checkbox"/>
Rimsherds	<input type="text" value="0"/>	Uncommon Obj.	<input type="text" value="0"/>
		Other	<input type="checkbox"/>

## Prehistoric Features

Mound(s)	<input type="text" value="0"/>	Storage/trash pit	<input type="checkbox"/>
Midden	<input type="checkbox"/>	Burial(s)	<input type="checkbox"/>
Shell midden	<input type="checkbox"/>	Ossuary	<input type="checkbox"/>
Postholes/molds	<input type="checkbox"/>	Unknown	<input type="checkbox"/>
House pattern(s)	<input type="checkbox"/>	Other	<input type="checkbox"/>
Palisade(s)	<input type="checkbox"/>		
Hearth(s)	<input type="checkbox"/>		
Lithic reduc area	<input type="checkbox"/>		

## Lithic Material

Jasper	<input type="checkbox"/>	Fer quartzite	<input type="checkbox"/>	Sil sandstone	<input type="checkbox"/>
Chert	<input type="checkbox"/>	Chalcedony	<input type="checkbox"/>	European flint	<input type="checkbox"/>
Rhyolite	<input type="checkbox"/>	Ironstone	<input type="checkbox"/>	Basalt	<input type="checkbox"/>
Quartz	<input type="checkbox"/>	Argilite	<input type="checkbox"/>	Unknown	<input type="checkbox"/>
Quartzite	<input type="checkbox"/>	Steatite	<input type="checkbox"/>	Other	<input type="checkbox"/>
		Sandstone	<input type="checkbox"/>		

Dated features present at site

Historic Artifacts			
Pottery (all)	<input type="text" value="0"/>	Tobacco related	<input type="text" value="0"/>
Glass (all)	<input type="text" value="0"/>	Activity item(s)	<input type="text" value="0"/>
Architectural	<input type="text" value="86"/>	Human remain(s)	<input type="checkbox"/>
Furniture	<input type="text" value="0"/>	Faunal material	<input type="checkbox"/>
Arms	<input type="text" value="0"/>	Misc. kitchen	<input type="text" value="0"/>
Clothing	<input type="text" value="0"/>	Floral material	<input type="checkbox"/>
Personal items	<input type="text" value="0"/>	Misc.	<input type="text" value="0"/>
		Other <input checked="" type="checkbox"/>	ship timbers, deadeyes, bricks

## Historic Features

Const feature	<input type="checkbox"/>	Privy/outhouse	<input type="checkbox"/>	Depression/mound	<input type="checkbox"/>	Unknown	<input type="checkbox"/>
Foundation	<input type="checkbox"/>	Well/cistern	<input type="checkbox"/>	Burial(s)	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>
Cellar hole/cellar	<input type="checkbox"/>	Trash pit/dump	<input type="checkbox"/>	Railroad bed	<input type="checkbox"/>	vessel remains	<input type="text" value=""/>
Hearth/chimney	<input type="checkbox"/>	Sheet midden	<input type="checkbox"/>	Earthworks	<input type="checkbox"/>		
Postholes/molds	<input type="checkbox"/>	Planting feature	<input type="checkbox"/>	Mill raceway	<input type="checkbox"/>		
Paling ditch/fence	<input type="checkbox"/>	Road/walkway	<input type="checkbox"/>	Wheel pit	<input type="checkbox"/>		

All quantities exact or estimated minimal counts

## Radiocarbon Data:

Sample 1:  +/-  years BP Reliability  Sample 2:  +/-  years BP Reliability  Sample 3:  +/-  years BP Reliability

Sample 4:  +/-  years BP Reliability  Sample 5:  +/-  years BP Reliability  Sample 6:  +/-  years BP Reliability

Sample 7:  +/-  years BP Reliability  Sample 8:  +/-  years BP Reliability  Sample 9:  +/-  years BP Reliability

Additional radiocarbon results available



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Description:

Late 18th-Early 19th century shipwreck

Unknown

## External Samples/Data:

Collection curated at MAC Lab

Additional raw data may be available online

## Summary Description:

Site 18DO497, also known as the Nanticoke River Shipwreck, is comprised of the submerged remains of a late 18th, early 19th century shipwreck near the Highway 50 Bridge over the Nanticoke River in Vienna, Dorchester County. Most of the wreck was recovered during removal of a destroyed fender system in preparation of the new fender system's installation. Some portions of the wreck may be buried beneath debris related to the old fender.

The town of Vienna is the second oldest municipality in Dorchester County, established by an act of Maryland's General Assembly passed in 1706. While earlier attempts to establish towns at Dorchester Town and Islington lasted only a short while, Vienna remained; its success in large part due to its location on a high, well-drained site, with deep moorage not far from shore, long used by the Nanticoke Indians and referred to as "Emperor's Landing". In 1671, Dorchester County requested that ferry service be established between present-day Vienna and "Ferry Point," on the outskirts of present-day Mardela Springs. On 19 April 1706, the Maryland Assembly passed, "An act for the advancement of trade and erecting Ports & Towns in the Province of Maryland." The Act specified that 100 ac (40 ha) would be acquired for each of several towns and ports to be developed, including one "at Emperor's Landing in Nanticoke River." Vienna grew rapidly during the late eighteenth century, serving as a port for the shipment of timber and tobacco. With its prominent location on the Nanticoke with sufficient draft for large, ocean going vessels, the town was ideally suited for commerce and shipbuilding, and in April 1762, a State Act was passed to designate Vienna as an official customs port. In 1768, the office of the Customs Collector was moved to Vienna. Around that time, the first shipyard on the Nanticoke was established in the town, as the residents began to turn their attention to shipbuilding.

At the outset of the Revolutionary War, Vienna was bustling as a center for trade and shipping. Shipbuilding thrived in the town, and at the time, the stays along Water Street were busy with the construction of Bay Schooners and other ships. For nearly the entire Revolutionary War, the Eastern Shore was the scene of countless raids and skirmishes between the American patriots and the more formidable Loyalist contingent. Loyalist raids were often carried out by marauders that were a combination of privateer and pirate, referred to as "picaroons," a term derived from the early seventeenth century Spanish word *picaron*, meaning roguish adventurer. Vienna was subjected to at least three such raids, the first of which occurred on 24 September 1780, when a force of Tory sloops and barges ascended the Nanticoke and landed at the town. The Tory force numbered only 32 men, though they met little opposition from the local militia or residents and proceeded to destroy a new brigantine belonging to Captain Robert Dashiell, of the Maryland State Navy, another brigantine belonging to Joseph Dashiell, a ship belonging to James Shaw, another under construction on the stocks belonging to Pritchett Willeis, and several other small vessels. The ships were seized in the Nanticoke and burned to the waterline. The picaroons also "hove down a New Vessel Belonging to Prichet Willeis that was Building and Destroy'd all the Tools the poore man had & did him much more Damage".

The next assault on Vienna came on 10 March 1781, when a privateer-picaroon expedition came up the Nanticoke and ascended on the town with a brig and two sloops, one of them newly built and armed with fourteen 18-pounders. The attack was initiated by a heavy bombardment of the town with both round and grapeshot. A small determined band of patriots, led by Colonel John Dickinson and Captain William Smoot, took positions along the riverbank to mount a defense. Three times the patriots beat back an attempt by the enemy to land a barge loaded with men. Intense fire from the Tory ships eventually pushed back the militiamen and the barge reached the shore. Casualties of the skirmish included three wounded and one killed of the attackers, with one killed of the patriots. Soon after the Tory forces landed, a flag of truce was forwarded to the militiamen. The attackers presented the proposition that the town provide them with its grain, for which the attackers would pay market price, or if the town refused to agree to the deal and resumed hostilities, the attackers would burn it to the ground and destroy everything within it. Colonel Henry Hooper, who had apparently arrived on the scene just before the landing, reasoned that as his force "could defend nothing, the Town and Grain lying under the command of their Vessels we agreed to their Terms".

Vienna was subjected to another picaroon raid on 27 August 1781, when two barges pushed up the Nanticoke to Vienna, plundered the town, and captured two or three fully laden vessels. One of the barges proceeded up the Nanticoke and captured two more vessels, while the other barge headed downriver with the ships captured at Vienna. Colonel Henry Hooper received belated word of the raid, quickly gathered a party of militia, and subsequently re-took three of the captured vessels. The militia then proceeded to cut off the retreat of one of the barges, forcing the picaroons to run the barge ashore and escape on foot. Three picaroons were captured and later sent to Annapolis as prisoners. After securing the first barge, Hooper dispatched a party down the river, but the second barge had disappeared. Upon receiving the report that the enemy's barge was not in the river, Hooper discharged the militia. At one o'clock the next morning, Hooper received an urgent message that the enemy barge had returned in the night and made prisoners of Vienna's inhabitants. Orders were issued for the militia to reassemble and march to the town, but the enemy escaped before their arrival.

During and after the Revolutionary War, commerce and investment in Vienna declined. Due to confiscation of British property and the lack of development in the town, the size of Vienna was significantly reduced in 1778 and 1785 surveys, with almost complete abandonment of the original 1706 plan of the town. During the War of 1812, Vienna was prepared for defense against British aggressions. Breastworks were thrown up at the saw-mill wharf and guns were mounted. A company of militia was organized and equipped ready for service. British ships were frequently within sight of the town, but made no attack, save for the occasional shot from long range.

Early efforts to improve transportation and access to Vienna during the early nineteenth century included the incorporation of the Nanticoke Bridge Company in 1818. In 1828, the first bridge was completed over the Nanticoke River at Vienna, replacing the ferry service that had been in operation since 1671. The Vienna Bridge, as it was designated on the 1849 US Coastal survey map of the Nanticoke River, was a wooden structure which spanned the 900-ft (274-m) river width and included a causeway across extensive marsh on the Somerset County side. The bridge remained until 1860 when its narrow opening, less than 30 ft (9.1 m) wide, proved too constrictive for larger ships to pass through without damage. Transportation across the river.

Vienna grew at a slow pace during the second half of the nineteenth century, never exceeding more than 350 residents. The only activity in Vienna during the Civil War was the occasional blockade runner making their way up the Nanticoke River to the town, where Confederate sympathizers provided them with provisions. By 1877, signs of improvement were apparent in Vienna, which by that time had approximately 60 dwellings, four churches, and a waterfront that consisted of wharves, granaries, a steamboat wharf, and the ferry crossing at the foot of Race Street, in its same location since 1671. At least 16 business establishments were located in the town in 1877, including the shipbuilding of Chesapeake Bay schooners on the waterfront, mills, canneries, a blacksmith, carriage and harness factory, agricultural processing and three doctors, plus the active ferry across the Nanticoke then once again reverted to ferry service. Following the stock market crash in October 1929, and the subsequent Great Depression, Vienna settled into a slow decline economically, particularly as nearby larger cities, such as Cambridge and Salisbury, offered better jobs and drew residents away for work. In 1931, a new concrete two-lane bridge was constructed across the Nanticoke River. Since World War II, Vienna has remained a quiet riverfront town.

In 2016, on behalf of the Maryland Department of Transportation's State Highway Administration (SHA), SEARCH conducted an emergency underwater archaeology investigation of a shipwreck discovered during the removal of debris associated with a vessel collision with the dolphin/fender system at the Highway 50 Bridge over the Nanticoke River. SHA removed the remains of a historic shipwreck while in the process of clearing the navigation hazard created by the demolished dolphin and fender.

With the guidance of SHA, SEARCH created a research design with a number of objectives that would determine the integrity of the Nanticoke River shipwreck and the recovered remains, identify additional features that may still exist on the river bottom, and determine the eligibility for listing in the NRHP of both the site and the recovered remains. These objectives include:



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Unknown

Description:

1. Archival and historical research,
2. Phase I marine remote-sensing survey,
3. Phase II archaeological diver investigation,
4. Recordation of shipwreck features currently housed at the MAC Lab, and
5. Wood speciation and dendrochronology.

Extensive research was conducted in order to develop the context necessary to understand the historical significance of the shipwreck and establish potential candidates for its identity and source of construction. Research included visiting libraries and repositories; speaking with local and non-local experts in the fields of maritime archaeology, ship construction, and local history, as well as local informants familiar with Vienna and the Nanticoke River; and reviewing secondary sources.

SEARCH conducted remote-sensing survey of approximately 2.9 ac (1.2 ha), which encompassed not only the area from where SHA recovered remains, but also the area surrounding all the structures associated with the navigation channel beneath the bridge. SHA requested the expanded survey corridor to determine the presence/absence of additional underwater sites adjacent to the entire fender/dolphin system. Remote-sensing survey was conducted from a 20-foot (ft) (6.1-meter [m]) aluminum hull, riverine vessel, which was equipped with all the necessary safety equipment.

Three tasks were established to determine the presence/absence of remains on the site following the recovery of timbers, delineate the horizontal and vertical boundaries of any remaining structure, and assess the archaeological integrity of any remaining structure:

- (1) Determination of extant hull remains through a combination of surface search and subsurface hydro-probing,
- (2) Exposed feature mapping utilizing a datum and baseline, and
- (3) Test excavation of buried structure.

SHA requested that SEARCH also examine the temporary dolphin work zone with archaeological divers to determine if shipwreck remains would be impacted during the installation of pilings.

An investigation of the sediment surface was conducted, which required a radius of 35 ft (11 m) to thoroughly assess the area of interest. This resulted in overlap with the previous search accomplished to clear the temporary work zone. A significant amount of modern debris in the form of I-beams, cut lumber, iron piping, and steel cable is still extant on the site, which complicated task completion and diver safety. Archaeological divers located several potential disarticulated shipwreck timbers and two bricks during the surface search. Several possible shipwreck timbers are located beneath modern debris and could not be recovered, but those that could be safely recovered were brought to the surface. Once recovered from the black river waters, most of the disarticulated timbers were found to be tree limbs or modern lumber. Four timbers and two bricks are historic and related to the shipwreck site; these were delivered to the MAC Lab for stabilization and documentation.

A sub-surface hydro-probing investigation was conducted next to determine whether substantial shipwreck remains are buried within 6 ft (1.8 m) of the sediment surface. The hydro-probing methodology was initially developed to include a grid centered on a baseline across the site remains. Archaeological divers were unable to locate any shipwreck structure; therefore, methodology was altered in the field. Sweeping circles radiating from the search centroid were not possible given the unexpected plethora of modern debris protruding above the sediment surface. This method was attempted, but soon abandoned because the negatively buoyant hydro-probe water hose consistently became entangled in I-beams, lumber, and steel cable. Instead, SEARCH determined the approximate direction of reported remains, based upon descriptions from the SHA barge crew during recovery and disarticulated timbers discovered during the sediment surface search, and established a 50-ft (15-m) baseline in the appropriate direction through the site. Hydro-probing followed this baseline with probes conducted out to 10 ft (3 m) to either side. Archaeological divers accomplished 33 probes across the location where SHA reported recovering shipwreck remains. Probes were spaced 5 ft (1.5 m) apart along the baseline and between 5 and 10 ft (1.5 and 3 m) perpendicular to the baseline; all probes returned negative results. This was expected, considering that recovered remains, consisting of the extreme lower portion of the hull, including the keel, were located at the sediment surface, as well as the negative findings in the sub-bottom profiler record. No intact shipwreck remains were located either on the river bottom in the area where SHA recovered the initial shipwreck remains, or within 6 ft (1.8 m) below the sediment surface where probing was conducted.

Shipwreck timbers, however, may be trapped below modern debris. Tasks 2 and 3 of this objective were not accomplished because no substantial, exposed, or buried ship components were identified in the investigation area.

The entire length of the keel was recovered intact and measures 30 ft 1.5 in (9.5 m) long. The keelson is disarticulated from the keel; however, comparison of fastener patterns and articulated floors attached to both the keelson and keel were used to determine its original positioning. It is 21 ft (6.4 m) long and is broken at the forward end approximately 15 in (38 cm) aft of where the apron originally would have been attached; there is a 7-ft (2.1-m) long crack in the center of the timber running aft from this location. Nine floors exist disarticulated, while five remain attached to the keel and two to the keelson (total=16). A third floor was recovered attached to the keelson, but became disarticulated during transport. Three floors are confirmed to originally reside in the keelson notches at the stern, and SEARCH identified a floor that likely resided in the fourth keelson notch, based upon its size, curvature, and fastening. The four floors that originally rested within the aft keelson notches are more substantial timbers with greater deadrise than floors in the main run of the vessel, and are sometimes referred to as "Y" frames.

SHA recovered 15 disarticulated futtocks from Site 18DO497. All but two timbers appear to be first futtocks. These are likely first futtocks due to the relatively flat curvature of the majority of futtocks, which indicates the bottom of the vessel, and because the site formation process resulted in survival of only the lower hold. The two possible second futtocks are too curved to reside at the bottom of the hull and the angle that the strake fasteners are driven through the timbers suggests they were originally positioned in a more vertical alignment. Futtock NR-FK04 is unique in its curvature and likely represents a futtock incorporated into a stern frame. SEARCH archaeological divers may have encountered a transom piece on the river bottom during the Phase II investigation; however, it was pinned beneath modern debris and could not be recovered safely.

A single stern deadwood timber is intact atop the keel and is fastened with one blind driftpin and two through bolts with clinch rings. The bolts are driven obliquely through the keel to prevent the timber from shifting longitudinally.

From the bow, several timbers were recovered. The apron, which was cut from a curved compass timber, is disarticulated from the remains and measures 5 ft, 3 in (2.3 m) long. The lower stempost is a gnarled, curved timber, broken at the upper end, and measures 3 ft, 2 in (1.4 m) in length. It originally was attached to the keel with one through bolt and a mortise and tenon (the iron peg tenon is still extant); a blind drift pin is driven through the timber that attached the apron to the lower stempost and then to the keel. One recovered timber could be the lower component of a bow cant frame. This timber resembles other first futtocks in its curvature and size – 4 in (10 cm) molded, 5 in (13 cm) sided, and 4 ft (1.2 m) long – but unlike other futtocks it is chamfered on both forward and aft upper faces of its heel.

Archaeological divers recovered a complete timber from the river bottom that may have originated in the bow. Its shape somewhat resembles a futtock, but its size is too meager to act as a frame component. The timber is sided 2.5 in (6.4 cm) at one end and tapers to 1 in (2.6 cm), and molded 3.5 in (8.9 cm) for the first third then quickly tapers to 2 in (5.1 cm). It also does not have evidence of extensive fastening, with only the remains of three trenails grouped close to one end. One end is cut at an angle in its upper face tapering its molded dimension. It resembles a gripe; however, the fastening remains do not match the blind bolt driven into the forward face of the lower stempost, nor do the curvatures of timbers coincide, so this is an unlikely description. It is possible this timber is a component of the knee of the head or the stem, perhaps an inner stempost.

The investigation documented 25 planks or planking segments that average 1.2 in (3 cm) thick; 8.4 in (21 cm) wide, with the widest measuring 10.75 in (27



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Unknown

cm) and the narrowest 4 in (10 cm); and 7.3 ft (2.2 m) long, with the longest measuring 14 ft (4.3 m) and the shortest 2.5 ft (0.8 m). Numerous planks possess diagonal cut marks evident of pit sawing and impressions of where they originally would have been attached to frames. The majority of planks are outer hull strakes judging by the fastening pattern.

Eight timbers were recovered that are likely sections of frame timbers, but are too fragmentary or degraded to determine their identity. Eleven fragments were recovered that remain unidentified; many are probably planking remains.

The remains of two deadeyes were recovered from the river bottom. They are both iron-bound chain deadeyes—meaning they are the lower blocks in a shroud pair—that originally would have attached to chainplates. One deadeye is near complete with much of the wood block extant and the entire wrought iron circular strap still resting in the block groove with the upper link of the chain assemblage intact. The second deadeye is missing the majority of the block and upper link of the chain assemblage. The more intact deadeye has three holes to accept a lanyard; there exists some evidence in the wood that the holes were scored to help prevent twisting of the lanyard. One measures 6.5 in (17 cm) in diameter and the second 7.5 in (19 cm) in diameter, with concretion. Three hand-formed bricks were recovered from the river bottom, one of which bears indiscernible markings. Bricks could have been utilized onboard for a small hearth. Ballast is another potential use; however, few bricks were recovered from Site 18DO497 indicating this is an unlikely identity, unless salvage of the Nanticoke River Shipwreck occurred.

The recordation of recovered shipwreck timbers objective was designed to capture diagnostic information helpful in reconstructing portions of the vessel and documenting construction aspects that would help identify the form, function, origin, and age of the vessel. Analysis of this information would be critical when assessing the eligibility of the shipwreck for inclusion in the NRHP, in addition to creating a permanent record of the remains. Archaeologists created hand-drawn sketches of every timber currently stored at the MAC Lab.

Oxford Tree-Ring Laboratory (OTRL) conducted the dendrochronology and wood speciation analyses on the Nanticoke River Shipwreck timbers. All samples collected for dendrochronology analysis proved to be white oak (*Quercus alba*), while a single slice from a futtock is of the genus hickory (*Cary sp.*) (further segregation of the particular species was not possible from the small sample). OTRL compared the Nanticoke River Shipwreck site master to more than 700 master chronologies from the East Coast of the United States and more than 1,500 master chronologies from the United Kingdom and Northern Europe.

OTRL determined a high degree of cross-match between the Nanticoke River Shipwreck site master and seven reference chronologies from the shores of the Chesapeake Bay region, six from Maryland and one from Virginia. This infers that the wood originated along the shores of Chesapeake Bay south of Annapolis and likely north of the Potomac River.

The date range of first and last measured rings from the site master is 1616-1743, meaning the terminus post quem for the Nanticoke River Shipwreck, based upon dendrochronology analysis, is 1743. None of the samples, unfortunately, retain complete sapwood to the bark edge; therefore, it is not possible to determine a terminus ante quem for the Nanticoke River Shipwreck based upon dendrochronology analysis. Although dendrochronology analysis cannot determine how long after 1743 the trees were felled, Worthington (pers. comm. 2015) speculates that the number of sapwood rings suggests the second half of the eighteenth century. This assessment is based upon the number of sapwood rings extant in the samples compared to the maximum number of sapwood rings encountered in reference chronology white oak. Worthington (pers. comm. 2015) cautions that a white oak example with more sapwood rings than currently recorded may not be nonexistent, just that it has not been documented to date.

Few timbers from Site 18DO497 were recovered intact in their original location. This presented the unique challenge of assembling a puzzle from a pile of matchsticks. A number of clues exist, including the construction of floors, futtocks, and strakes; fastening patterns; timber impressions on garboard strakes; and shipwright markings, to formulate the following working hypothesis regarding the framing pattern for the vessel. Floors and futtocks are disarticulated from one another as a result of either the site formation process or their recovery from the river bottom. It is therefore difficult to know for certain if the frames were constructed utilizing a single frame technique or one of several double frame techniques, including never being attached (earliest form of double framing). The following interpretation, however, is a sound hypothesis based on observable clues to present the most likely method.

It is not possible to unequivocally determine the method of construction for the Nanticoke River Shipwreck, but multiple lines of evidence suggest the shipwright utilized the whole molding technique. The framing pattern, based upon the available evidence, resembles what Morris et al. (1995:2) describes as single, nonlinear frames utilized in eighteenth century and earlier construction, prior to the evolution of the double frame. In this pattern, the first futtock is attached to the floor with multiple lateral fasteners and an offset between the heel of the futtock and the centerline of the vessel. Subsequent futtocks also are attached with offsets and multiple fasteners. The floor and first futtock attachment of the Nanticoke River Shipwreck resembles this pattern, but there is not enough evidence to determine the norm for the first and second futtocks attachment. SEARCH identified a number of archaeological examples of shipwrecks with similar framing patterns; the Brown's Ferry Vessel, Lyons Creek shipwreck, the Malcolm boat (38CH803) excavated near Charleston, South Carolina, and the schooner Nancy are among those that have similar framing.

The carvings depicted on the Nanticoke River Shipwreck timbers resemble Roman numerals, and based upon the apparent date of construction fit the carving category of construction symbols. Although a lack of context and other comparative timbers prevent a solid interpretation for the symbols, it is a more plausible explanation that the symbols represent construction cues placed by the builders.

It is difficult to reconstruct the bow with the limited remains; however, it appears that cant frame heels butted against the apron in a radial pattern to form the desired curvature. This is reminiscent of archaeological remains of a number of eighteenth and early nineteenth century vessels, such as the before mentioned Malcolm boat (38CH803) and Nancy, as well as the Martinak boat (18CA54).

The stern construction of the Nanticoke River Shipwreck includes Y frames with relatively sharp deadrise, deadwood timber with half frames notched into it, and potential cant frames, all of which infer a transom stern. There also is the possibility a transom timber exists on the river bottom beneath fender debris.

The sternpost is not extant, but it appears that it would have had minimal rake. When comparing stern construction to other vessels, the deadwood timber in particular is similar to the deadwood utilized in several eighteenth and early nineteenth century vessel remains SEARCH researched, including the beforementioned Nancy and Martinak boat (18CA54).

Dendrochronology analysis places the origin of timbers utilized in the Nanticoke River Shipwreck along the coastline of the central or southern Chesapeake Bay, between Annapolis and likely the Potomac River, strongly inferring that the vessel was built in Maryland.

A number of clues exist to suggest the Nanticoke River Shipwreck may not have been professionally constructed, but instead originated on a plantation or rural creek. It has not been determined how the sternpost originally attached to the vessel. Perhaps the post was fastened fore-and-aft to the aft face of a second deadwood timber with additional support in the form of gudgeon straps. The lack of lower fastening, however, certainly weakens the post integrity.

Other haphazard techniques recognized on the Nanticoke River Shipwreck include: the failure to completely cut away the sternpost scarf, the ill-formed garboard rabbet on the apron, the floor in the apron notch that was attached to neither the keel nor keelson, and a treenail hole for an apron floor drilled immediately adjacent to a driftpin fastening the apron to the keel. Other construction attributes question the materials available to the Nanticoke River Shipwreck shipyard, such as the absence of fishplates attached to the sternpost or the stempost and the reliance upon wood fasteners when attaching heavy timbers that typically require long bolts and drift pins (of the 20 floors attached directly to the keel, potentially only 40 percent are attached with iron drift pins) draws into question the materials available to the Nanticoke River Shipwreck builder. These choices could imply that either the shipyard did not have access to the requisite iron hardware or lacked the capital to purchase a sufficient supply. Established, professional shipyards certainly had access to iron materials, since a sufficient number of foundries had developed in the Colony by the middle of the eighteenth century to supply local shipbuilders. Several floors were left unattached to the keelson, which weakens the backbone of the vessel, and it appears that two floors had a second fastener driven through them. SEARCH did not identify wedged treenails in the Site 18DO497 remains. The common practice of wedging treenails in wooden hull construction serves the dual



# Phase II and Phase III Archaeological Database and Inventory

**Site Number:** 18DO497

**Site Name:** Nanticoke River Shipwreck

 Prehistoric 

Other name(s)

 Historic 
**Brief  
Description:**

Late 18th-Early 19th century shipwreck

 Unknown 

purpose of expanding the wood to resist separation and helping caulk the ends. Finally, there is a lack of consistency in the fastening pattern of strakes, a number of fasteners that appear driven unnecessarily close to one another, corrected fastener placement, and in some instances an overabundance of fastening that bestows a haphazard method of planking the hull.

Any one of the previous examples could be attributed to an exception to established methods, but taken together, they suggest that the Nanticoke River Shipwreck was not constructed at a professional shipyard overseen by an experienced shipwright. The simpler construction method of whole molding, as well as analyses of fastening hardware, fastener patterns, and attachment mistakes, provides further insight into the possible skills of and materials available to the builders. There exists, therefore, the likelihood that the vessel was constructed at a small, inexperienced private shipyard—perhaps on a plantation—that lacked the experience, knowledge, skilled labor, and materials to properly construct a wooden sailing vessel. Construction workers at such a lay “shipyard” may have included enslaved African- American workers.

SEARCH assessed the site (18DO497) for additional remains and documented the recovered timbers, which are currently stored at the Maryland Archaeological Conservation Laboratory. Construction methods and dendrochronology analysis suggest that the Nanticoke River Shipwreck is an eighteenth century merchant vessel, approximately 40-45 feet long, and rigged with one or perhaps two masts. She was constructed in Maryland from local materials, possibly at a small shipyard or plantation, and possesses design characteristics that may represent an early stage in the evolution towards the Chesapeake Bay cargo carrying pilot schooner and eventually the famed Baltimore clipper. SEARCH argued that the Nanticoke River Shipwreck was eligible for listing in the National Register of Historic Places (NRHP) based on her design characteristics and unique ties to the Maryland and American maritime traditions. However, the Maryland Historical Trust determined that 18DO497 is not eligible for the NRHP based on its compromised integrity.

## External Reference Codes (Library ID Numbers):

95002550, 18DO497 SF