



Phase II and Phase III Archaeological Database and Inventory

Site Number: 18ST647

Site Name: Ballast Stone

Prehistoric

Other name(s) (HSMC: 18ST1-647), Ballast Cluster

Historic

Brief Description:

Underwater concentration of stone and oyster shell with 17th century artifacts

Unknown

Site Location and Environmental Data:

Latitude 38.1798 Longitude -76.4370

Maryland Archaeological Research Unit No. 10

SCS soil & sediment code

Elevation m Site slope

Physiographic province Western Shore Coastal

Terrestrial site

Underwater site

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

Ethnobotany profile available Maritime site

Topography

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

Ownership

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

Nearest Surface Water

Name (if any) St. Marys River

- | Saltwater | | Freshwater | |
|--|---|---------------------------------------|---------------------------------|
| Ocean <input type="checkbox"/> | Estuary/tidal river <input checked="" type="checkbox"/> | Stream/river <input type="checkbox"/> | Swamp <input type="checkbox"/> |
| Tidewater/marsh <input type="checkbox"/> | | Lake or pond <input type="checkbox"/> | Spring <input type="checkbox"/> |

Minimum distance to water is 0 m

Temporal & Ethnic Contextual Data:

- Paleoindian site
- Archaic site
- Early archaic
- Middle archaic
- Late archaic
- Woodland site
- MD Adena
- Early woodland
- Mid. woodland
- Late woodland

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

Unknown historic context

Unknown prehistoric context

Unknown context

Ethnic Associations (historic only)

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

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

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

- Religious
- 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

possible ballast pile

Interpretive Sampling Data:

Prehistoric context samples

Soil samples taken

Flotation samples taken

Other samples taken

Historic context samples

Soil samples taken

Flotation samples taken

Other samples taken

N

Geological: R. Eschelman; Biological: Walter Hatch



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Diagnostic Artifact Data:

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

Prehistoric Sherd Types

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

Historic Sherd Types

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

All quantities exact or estimated minimal counts

Other Artifact & Feature Types:

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

Prehistoric Features

Mound(s)	<input type="checkbox"/>	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		Tobacco related	
Pottery (all)	2	Activity item(s)	61
Glass (all)	<input type="checkbox"/>	Human remain(s)	<input type="checkbox"/>
Architectural	30	Faunal material	<input checked="" type="checkbox"/>
Furniture	<input type="checkbox"/>	Misc. kitchen	<input type="checkbox"/>
Arms	<input type="checkbox"/>	Floral material	<input type="checkbox"/>
Clothing	<input type="checkbox"/>	Misc.	222
Personal items	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/> stones

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"/>	stone concentration	
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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External Samples/Data:

Collection curated at Historic St. Mary's City

Additional raw data may be available online

Summary Description:

Site 18ST647 (previously 18ST1-647) is an underwater concentration of ballast stone that appears to represent the archeological remains of a submerged colonial vessel in St. Mary's County. The site lies below 3-4 m of water roughly 23 m from the east bank of the St. Mary's River, adjacent to Historic St. Mary's City. The water is brackish and subject to tidal currents, although these are rarely strong. Salinity in the river varies between 10 ppt and 20 ppt and the bottom substrate consists mainly of 15-30 cm of silt with a layer of oyster shell resting on top. The temperature (typically between 0-30° C) and salinity of the river make it a hospitable environment for shipworms (*Teredo navalis*), as well as other marine borers during the warmer months. Any wooden ship remnants not quickly buried in sediment are unlikely to survive to today.

The colony of Maryland was first settled in 1634 under a 1632 royal charter applied for by George Calvert, the first Baron Baltimore. George Calvert died before the charter was granted, however, it was granted to his oldest son, Cecil. Baron Baltimore's younger son, Leonard, would settle the land as the first Governor of Maryland. The first settlement, St. Mary's City, was established just to the east of 18ST647, on the shores of the St. Mary's River. St. Mary's City served as the capital for the quickly expanding colony of Maryland from 1634 until 1691, when political upheaval pushed the capital northward to its current location in Annapolis. Throughout the early colonial period, St. Mary's City was a main center of commerce, and its residents produced thousands of hogsheads of tobacco each year for export to England, as tobacco production was by far the major economic activity in the colony.

Following the move of the capital city to Annapolis, St. Mary's City's population quickly dwindled to only a small handful of families. These families began to keep African slaves, a practice which was not overly common in the 17th century. These few families and their slaves continued to produce tobacco, although the quantities produced in the area are almost certainly far decreased from the major period of occupation of the 17th century. The era of sparse inhabitation continued into the 19th century, when St. Mary's Female Seminary was founded in 1840. In the 1940s, the seminary became a Junior College. Populations remained low, however, until the 1960s, when the all-female junior college became a co-ed four-year college. The original town of St. Mary's City currently exists as an archeological park and a living history museum, and since the 1960s has been studying the colonial and prehistoric aspects of the city.

The site was first discovered during a 1994 survey of the St. Mary's River by the Maryland Maritime Archaeology Program (MMAP), a program of the Maryland Historical Trust (MHT). It was located via side-scan Sonar and then examined by divers. A one-meter square test pit was dug to a depth of 50 cm by the divers. This yielded a total of 58 ballast stones, three Dutch red sugar bricks and a white clay pipe stem with an 8/64 in bore. Subsequent research has turned up a 7/64 bore diameter stem. Both together suggest dates shortly after 1650.

An East Carolina University MA thesis from 1999, focusing on the 17th century shoreline of St. Mary's City, also entailed an examination of 18ST647. Mapping of the site revealed that it was, at that time, buried under between 15 and 30 cm of sediment and oyster shell. The site was described as extending at least 12.5 m in length and ranging from 1-3.6 m in width and extending in a southerly direction from the shoreline into the deeper channel of the river. A preliminary examination was made of the ballast stones recovered during the 1994 survey which revealed the ballast to be of European origin, specifically from England. More than likely, the ballast originates in North Devon, from the Northam Burrows Pebble Ridge. A North Devon Sgraffito sherd found within the ballast further strengthens this location as the source of the ballast. Follow-up work by the Historic St. Mary's City (HSMC) Commission revealed the site to be more than 15 m in length and up to 6 m in width.

A survey to examine the site's potential for further study was undertaken in 2011. The survey included reconnaissance diving and a side-scan Sonar survey in conjunction with the Institute for Maritime History. During this survey, it was observed that the site was buried under sediment, but that a side-scan Sonar anomaly in the shape of an elongated oval (i.e. ship-shaped) in the location where the ballast distribution is described by previous researchers. Further, a brick having the appearance of a Dutch red brick was observed lying on top of the sediment nearby.

The results of these various studies suggest several things about the site. The elongated oval shape of the ballast deposit strongly suggests that this is an abandoned vessel and not a ballast dump. The Dutch bricks removed from beneath the ballast stones and elsewhere suggest a 17th century date. The European ballast stones suggest that the site represents the remains of an ocean-going trade vessel and large-bore pipe stems strengthen this position.

The most recent fieldwork at 18ST647 occurred in the spring of 2012. The work entailed detailed mapping using GPS and diving on the site. The first two days of diving were spent attempting to locate the site based on maps from previous fieldwork. This included visual inspections of the river bottom and probing of the soil using thin fiberglass rods to feel for ballast beneath the sediments. On the afternoon of the second day, visual confirmation of the site area was made when numerous bricks were seen on the surface of the riverbed. On the morning of the 3rd day, a 30 m baseline was set in this area and a controlled search was made of the area, photographing artifacts as they were observed.

It was determined that the baseline needed to move an angle, pivoting from the southern point more toward shore. This was done, and then a series of stakes were set to define and contain the site area. Floats were then attached to these stakes to make the site area visible from the water's surface which were later adjusted as the main site area was further refined. A laser transit was then used to map the location of the baseline and stakes using a diver with a reflector at the water's surface, holding the buoy lines taught and as directly plumb with each of the stakes as possible. An error of roughly 66 cm in the mapping is likely due to the submerged conditions and burial in the sediment.

The site was then subdivided into five sub-areas and each was examined for artifacts visible above the sediments. A total of 6 artifacts were observed within this area. Notes were made on the locations of each artifact and they were photographed in situ, tagged, and then raised to the surface. The artifacts were stored temporarily in a container with water from the river and transported to the archeological laboratory for Historic St. Mary's City, where they were transferred to another container with fresh water to begin desalination. The artifacts raised were 2 small broken ballast cobbles, 1 large ballast cobble, a full-sized brick bat, and 2 small Dutch brick bats. Additional brick bats were noted lying on the river bed, both within the oval-shaped anomaly area and outside.

A final dive was then made to prepare the site for an extended period of dormancy. Floating lines were removed, stakes were set further into the sediments, and a new baseline was set, removing the anchor line that had previously denoted it and changing it to a clothesline. It was hoped that these demarking lines would remain in place until additional work could be conducted at a future date.

Most of the brick encountered at the site was of the small size and characteristics consistent with 17th century Dutch red 'sugar' brick, often used in fireplaces



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and paving applications in that period. The bricks observed were generally quite intact, and it has been suggested that they would perhaps be associated with a ship's galley as the oven would have likely been brick-lined. In addition, the bore diameters of pipe stems recovered in earlier studies suggested dates around 1650. The size of the ballast anomaly indicated by side-scan sonar suggests a ship dating to the period prior to the introduction of water ballast. In wooden ship terms, ballast in these dimensions would be indicative of a vessel of approximately 100-120 tons burthen, well within the average of European vessels trading in the Chesapeake during the 17th century.

Based on the findings of the 2012 study, in combination with the results of earlier work, Site 18ST647 appears to be a significant maritime archeological resource. The evidence very strongly points towards the presence of submerged 17th century site vessel.

A Phase II testing program was carried out in 2013. The methodology chosen was to perform limited, systematic testing of select areas of the site. The proposed work was for six test units, each 1x1 m, to be uncovered, which ultimately resulted in seven with permission from MHT, as the first was excavated far outside the actual site area. Excavations were guided by a PVC grid system, and excavated using an induction dredge.

Prior to excavation efforts beginning, a new sonar survey was conducted on 11 June 2013 in conjunction with MHT to identify and define the site area. A Sea Scan 600kHz towfish was used to examine the site area, and other coves along the eastern bank of the St. Mary's River. Despite running seven transects over the expected site location, no anomalies were noted anywhere near the area described by Thompson or Embrey. Another possible site was noted during the course of the survey, having a very strong sonar reflection indicating a hard bottom in a linear distribution, approximately 18x6 m (60x20 ft). It is possible that this is an area of heavy oyster shell; however, this has not been confirmed through diver investigations.

As no indication of the site was given via remote sensing, some reconnaissance dives were made on 14-15 June, 2013 to search for any exposure of ballast material, or a concentration of artifacts. Two areas were identified to focus our efforts. The first was the area indicated by Thompson, just south of the two exposed pilings, and the second, the area indicated in the 2001 HSMC shoreline survey. Neither area yielded visible artifact concentrations, but an area between the two points was noted as having features similar to those described by Embrey. This area was chosen, despite not matching with previous site maps, as it seemed the better fit, and the grid was deployed over this area and mapped in place.

Excavations efforts began on 19 June and one test unit was excavated in this area. One fragment of handmade brick was found in this test unit, but no sign of any ballast material. It was decided that several test windows, similar to shovel test pits common on terrestrial sites, should be made around the grid area, as the number of permitted test units was limited. Each test window measured approximately 35 cm in diameter, and was hand excavated to a depth of around 15-20 cm. Artifacts found in test windows were to be left in situ and reburied with sediments. No indication of ballast material or other artifacts were found within the grid area. A decision was then made to attempt this same methodology in the area south of the grid, around the areas indicated in the HSMC survey.

The two more westerly locations were positive for non-native cobbles and handmade brick, indicating that this was the site area. This was 7 m west of the area mapped in the HSMC shoreline survey, which was also tested in this phase with negative results. Based on what was found, the grid was moved to fit within the two positive test windows.

Excavations resumed, and three more areas were opened (Test units 2, 3, and 4). Each of these three locations showed some signs of ballast stones, but not the heavy concentrations reported by previous researchers. What was found would be better described as a scatter than a concentrated distribution.

Test unit 5 moved to the northwest area of the excavation grid, and came down on a heavy concentration of cobbles running through most of the unit. The southeast portion of the test area was virtually cobble free, indicating that this unit was on the edge of the feature, which was running southwest as indicated by Embrey. The ballast showed signs of ordered stacking, with larger cobbles at the top of the feature.

In all, 60 cobbles were excavated from this unit. The materials were mostly fine-grained sand stones and quartzite, and will be discussed further in the following section. A single sherd of ceramic was also found in this unit, mixed in amongst the stones in the center depths of the ballast feature and beneath a cobble. The ceramic is a jug-form sherd of North Devon Sgraffito Ware, a slipware produced in the North Devon towns of Barnstaple and Bideford in the 17th and 18th centuries. Stylistic differences exist between the 17th and 18th century variants, and this ceramic type is very rarely found on New World sites post 1700.

Two meters north of test unit 5, the sixth unit was opened, also revealing a very heavy concentration of stones. Three test windows excavated just north of this unit yielded no ballast material, indicating that this is the northern limit of the site. Work in test unit 6 further showed evidence of ordered stacking of the cobbles, again with the larger stones positioned in the top layer of the ballast. Two wood fragments were found within the 86 cobbles and stones observed within this unit. The two pieces mend together, and have two small holes bored through them (figure 18). The wood appears to be worked, has a rounded profile on each of its longer sides, and of a shape consistent with a fragment of a hollowed log. The wood is in a well preserved state, with no visible evidence of worm damage. While slightly softened, the cellular integrity is well intact.

Numerous handmade bricks were found both within and around the site. Some were mixed in with the ballast, many of which were mostly complete bricks. There was no evidence of mortar on any of the bricks, indicating that these bricks are part of the ballasting material, rather than ruins of any assembled structure such as a ship's hearth or a building along the shoreline. Despite being broken, the bricks are mostly of substantial size. They would have been unsalable in this condition, but still useful as ballast. Further suggesting that these represent ballast material is that bricks were found within the ballast stones, indicating that they were not part of a cargo. Several of the ballast stones, found only at the top of the concentration, are of a very different lithic make up (figure 20). These stones are comprised of calcium carbonate with evidence of marine sponge intrusion. The stones are generally very heavy in comparison to the other ballast material, weighing as much as 4.5 kg (10 lbs), bordering the geological description of a boulder. Only five such examples were found from the 218 cobbles collected.

The concentration and distribution of ballast material is the most compelling aspect of this site discovered thus far indicating that this site may be the remains of a vessel, rather than discarded ballast. The three test areas excavated within the ballast feature show a fairly uniform vertical distribution of the stones, between 20 and 25 cm, and a seemingly intentional order to the stones, with the largest cobbles placed on top. Embrey had previously described the stones as being distributed in a linear pattern (1999 map indicating an ovate pattern), extending more than 41 ft (12.5 m) in length, and at least 12 ft (3.6 m) wide. The size and shape alone suggest the site to be a vessel, but the new data collected on the density of the distribution and apparent non-random order add additional weight to this possibility.



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Samples of the ballast material have been examined and described by geologist Dr. Ralph Eshelman. The ballast is comprised predominately of medium to light gray, fine-grained sandstone and quartzite. The stones fit within the standard geological definition of cobble-sized, and have a well rounded appearance, indicating a coastal source. Eshelman suggests these stones to have likely come from England's west coast, or the Atlantic Coast of Canada. Both of these areas have incredibly similar geologies, having been connected during the last supercontinent. Several beaches along the Bristol Channel consist of similar lithic material, but are more protected from wave action, making a beach within the channel a more likely source. A large swath of the Welsh side of the channel, from Cardiff to Newport, consists of similar cobbles which are less affected by wave action than the cobbles from North Devon. Further, Wales is well known for its limestone, and some coastal lime outcroppings exist in this region.

The several calciferous stones found in the ballast provide stronger evidence that the vessel carrying this ballast had recently departed English waters. First suspected to be fossilized coral, as seen in many of the caribbean islands, closer examination showed these to be limestone and chalk rather than coral, although they showed significant signs of intrusion by marine organisms. The faunal remains from these stones indicate that they originated in the north to mid Atlantic, between ca. 30-55° north of the equator. Both of the identified species require salinities greater than 20 ppt. These samples must therefore originate from a limestone or chalk outcropping in a marine environment, most likely intertidal, to allow for human collection of these stones to be used as ballast material.

Such chalk outcroppings do not exist on North America's Atlantic coast, and the overwhelming majority of littoral calciferous reefs in Europe are in England. Several such reefs also exist in locations around France, Germany and Denmark; although these locations are unlikely as there was no direct trade between the Chesapeake and these countries. This evidence almost certainly demonstrates an English origin for the calciferous ballast material present on 18ST647 and provides some circumstantial evidence that the remainder of the ballast originates in England rather than Newfoundland.

The ceramic sherd found within the ballast is stylistically consistent with 17th-century design, most notably in the stippling present in the leaf design. This single artifact offers a both a strong terminus post quem and terminus ante quem. The abandonment of St. Mary's City after 1691 and the movement of the capital to Annapolis in 1695 suggest a date no later than the early 1690s, as after 1695 ships would not need to visit St. Mary's City directly upon arrival in Maryland waters to settle port fees and duties.

The small wooden object found within test unit 6 offers some additional clues toward suggesting the site to be a sailing craft. The object is constructed of hardwood, identified through thin slice microscopy as a species of Elm, with a smooth finish on the outer surface, and roughly rounded on the interior. Two small stitching holes are drilled through the artifact, and it has the general appearance of being part of a hollowed log. Elm is a highly favored wood for ship building as it grows tall, rigid, is generally straight-grained, and is highly resistant to rot when wet. These characteristics made it an ideal wood for two specific parts of a ship: the keel, and the bilge pump, although it was used for other small ship parts as well. The fragment is small, and no conclusive determination of its use can be made, but the shape is consistent with what would be expected of a bilge pump. The placement of the object within the ballast is also indicative of being a bilge pump, as the bottom of the pump would extend into the ballast material.

Through work thus far performed on 18ST647, it has been demonstrated that the site is likely a mid to late 17th-century deposit of ballast material, originating at least in part in England. Additional datable finds would be necessary to claim this date conclusively, although as the data stands at present, this appears a reasonable working hypothesis. The suggestion that the site represents the remains of a ship persists as a possibility despite having found no elements of ship structure. Ballast density and arrangement, along with the site's proximity to the town center, a central access point to the town, and the historic period shoreline all offer evidence for this site being the remains of a ship. As a vessel grounded this close to shore would have been likely found to be inconvenient, it may have been dismantled for firewood or building materials, offering one conceivable answer for the lack of ship structure found on site. Conversely, it is possible that 18ST647 is simply offloaded ballast. Additional testing will be necessary to make a determination in either direction.

External Reference Codes (Library ID Numbers):

95002113, 95003200