

NELSON'S DOCKYARD NATIONAL PARK,  
ENGLISH HARBOUR, ANTIGUA,  
PROGRAM IN MARITIME STUDIES FIELD SCHOOL FALL 2022



View of English Harbour 1800 to 1900 (Library of Congress, Public Domain)

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## ABSTRACT

The following report includes the results of ECU's Fall Advanced Field School in Antigua in partnership with National Parks Authority of Antigua and Barbuda and University of Antilles. The field school comprised several projects specific to teaching and learning requirements and partnership needs. The primary focus of the field school included assisting University of Antilles partners with the excavation and recording of Tank Bay Shipwreck. Secondary projects included assisting the Park recording sections of the Naval Dockyard seawall and other topside features and artifacts, associated forts and buildings, and a snorkel survey. In addition to fieldwork, the team held a UNESCO UNITWIN training in underwater archaeology for diving professionals of Antigua. The details of the field school are reported below.



## Acknowledgements

Many individuals and organizations contributed to the success and efficiency of this fall semester 2022 field school. First and foremost, we would like to thank Dr. Jean-Sébastien Guibert Association Archéologie Petites Antilles (AAPA) in partnership with the University of Antilles permit holder for the Tank Bay wreck project, Dr. Christopher Waters, Director of Heritage Resource and Delsey Gardner, Heritage Resources Officer of National Parks Authority of Antigua and Barbuda, Nelson's Dockyard National Park, English Harbour, Antigua, for inviting the Program of Maritime Studies, of East Carolina University to be part of this exciting project. Your collective leadership and generosity in this collaboration was outstanding. The partnership project was an incredibly valuable field and professional experience for our ten graduate students. Working side by side with the AAPA team members Jean-Sébastien Guibert, Franck Bigot, Alain Tissier, Margaux Tronchet, Jean-Luc Verdier, Claude Michaud substantially enhanced both the archaeological and culinary experience!

Chris and Desley, we would like to thank you profusely for your generous help and hospitality for everything from multiple airport transportations, unexpected medical emergencies, office space, coordinating boats and boat captains, and arranging opportunities to work with the local community and media. We realize also that it would not have been possible without all the other behind the scenes work of Ann Marie Martin, Parks Commissioner, and the entire NPA. It made a huge contribution towards the challenges of offering a first-time field school in a new venue and making it a success. The research vessel *Acropora* was an excellent work platform, and we could not have executed our daily commutes and mooring exercises without the superb boat captains Ruleo Camacho, Marinus Smith, Travis Weste, Sherwin Mescall and Derrick "Que" Johnson.

Waterfront Inn was the perfect accommodation venue with a wonderful kitchen and open patio to watch Antigua harbor sunsets. Many thanks to Jenna and Joey Compton, owners of the Waterfront Inn and all the staff: manager Kimesha (Kim) Mickle who organized billing and patiently responded to millions of questions, Sheneeze Cummings (we highly recommend her hot sauce), and Enid Smith who helped in innumerable small ways. Last and not least, Karen Underwood, our Program in Maritime Studies administrator, helped with all the challenging aspects of budgets, paperwork, and administrative aspects in organizing and wrapping up billing for an international field school.

## Introduction

In fall semester 2022 the Program in Maritime Studies of East Carolina University conducted a field school in Antigua, a Leeward Island in the Caribbean region from October 15-31. The ECU faculty and staff leaders consisted of: Professor Lynn Harris (Principal Investigator), Professor Jennifer McKinnon (Co-Investigator), Jeremy Borrelli (staff archaeologist), and Ryan Bradley (Diving and Water Safety Officer). Our team comprised second year MA graduate students: Ian Cole Dunshee, Levi Eric Holton, Raymond Carleton Phipps, Olivia Livingston, Dayan Goulet Weller, Nicholas Baker, Logan Garrett Willis, Katelyn Dannielle Rollins, Daniel Jordan Schaefer, and Madison Elsner. Students learnt to apply archaeological skills and techniques learnt in HIST 6820 (Research Methods for Nautical Archaeology), and HIST 5520 (Field School in Maritime History and Underwater Archaeology). The objectives were to: modify skills and techniques learnt in summer field school (HIST 5520) and adapt to new data sets, sites, and environments; compile archaeological and historical information; evaluate and analyze archaeological and historical information; create a scientific report about the project as a team describing, illustrating, and interpreting archaeological and historical information; and present illustrated talks to the public on the field school research outcomes.

The field school had multiple opportunities for students to learn and practice skills. They participated fully in excavating and documenting the Tank Bay shipwreck, recovering, and curating artifacts from the wreck, and compiling and post processing data – all culminating in further historical research to co-author a report for submission to the Naval Dockyard UNESCO World Heritage Site managers in December. Other fieldwork activities extended to underwater mapping of a historic quay in the dockyard, documenting historic cannon, anchors, and multiple historic fortifications “at risk” on the hilltops surrounding the harbor. In addition to historic

structure research, the team also gathered baseline data (using photography, LIDAR, and 3-D modelling) on erosion on these coastal heritage sites, and on submerged seabed areas below the fortifications where historic artifacts and old anchorage mooring chains abounded. All these cultural sites also fall within the boundaries of the Naval Dockyard UNESCO world Heritage Site. Daily students were split daily into two or three sub teams with 1. Shipwreck excavating team (Dive Safety Officer present) 2. Dockyard, a quay and coastal structures like fortifications (land survey) recording team 3. Artifact excavation processing team.

The expedition represented a collaboration between Program of Maritime Studies at East Carolina University, the University of the French West Indies (AIHP GEODE), the Antigua and Barbuda National Parks, and supported by Antigua & Barbuda Search and Rescue (ABSAR) and the American Association of Port Authorities. It was made possible with contributive financing of the French Ministry of Europe and Foreign Affairs, the Directorate of Memory, Culture and Archives of the French Ministry of the Armed Forces, the National Park of Antigua and Barbuda and East Carolina University. Dr. Jean-Sébastien Guibert led the team of the Association Archéologie Petites Antilles (AAPA) consisting of the AAPA team members Jean-Sébastien Guibert, Franck Bigot, Alain Tissier, Margaux Tronchet, Jean-Luc Verdier, Claude Michaud in partnership with the University of Antilles. He was the permit holder for the Tank Bay wreck project.

Our hosts in Antigua were Dr. Christopher Waters, Director of Heritage Resource and Delsey Gardner, the Heritage Resources Officer of National Parks Authority of Antigua and Barbuda, Nelson's Dockyard National Park, English Harbour. NPA is the recognized managing Authority for this UNESCO World Heritage Site. Boat captains Ruleo Camacho, Marinus Smith, Travis Weste, Sherwin Mescall and Derrik "Que" Johnson assisted with the logistics of the project.

Our team also worked with several regional leaders and stakeholders representing commercial and recreational SCUBA groups by offering UNESCO UNITWIN capacity building workshops in the evenings or as part of daily rotations. Our ECU Program is a full member of this organization that promotes international networking, academic, and community collaboration.



FIGURE 0.1. Collaborative East Carolina University, National Parks Authority of Antigua and Barbuda, the Association Archéologie Petites Antilles/ University of Antilles team (Courtesy of NPAA, 2022).

The NPA officers had several strategic objectives that ECU could potentially contribute towards:

Objective 1:

- Develop a long-term strategic plan and UNESCO World Heritage Management Plan for the sustainable maintenance and use of the historic buildings in the Dockyard Precinct while protecting and enhancing the OUV
- Collect baseline and intensive data which will inform ongoing management plan upgrades and future planning for the sustainable use of English Harbour
- Collect baseline data for Fort Berkeley erosion to assist in developing and executing a stabilization plan.

Objective 2:

- Record and monitor archaeological sites within the WHS and NDNP while protecting and enhancing the OUV
- Mapping the Tank Bay Wreck for its long-term protection and interpretation
- Mapping English Harbour for the heritage assets and developing management plans for their protection
- Collect baseline data for Fort Berkeley erosion

Objective 3:

- Expand research opportunities for secondary, tertiary and professional researchers in heritage, heritage management, culture, archaeology, history, and related subjects with the NPA as an equal partner
- Collaboration with the University of the Antilles and Eastern Carolina University and possible future collaboration in recording, stabilization projects, geographical and geological studies
- Offer training for Antiguan and Barbudan diving operations and other governmental organizations to enhance capacity for the NPA and Antigua and Barbuda
- Generate new interpretation for national and foreign visitors

Objective 4:

- Enhance development guidelines, development monitoring and development recording within the NDNP
- Increase capacity in baseline data acquisition, management processes and procedures, and recording.

Nelson's Dockyard National Park is one of the highlights for tourism ventures in Antigua and Barbuda. Although it served as the former British Naval Dockyard heavily reliant on enslaved labor, the heritage site spans the 20th century including WWI and WWII activity. The Royal Navy relinquished control of property in vicinity of English Harbour in 1899 and granted title to the Crown. In 1906, the Crown gave the title to the colonial government of Antigua (Antigua and Barbuda National Park Service, About the Park). The stewardship of the National Parks Authority over Nelson's Dockyard National Park was recognized by UNESCO in 2016. The Dockyard and

surrounding military archaeological sites were officially inscribed as a World Heritage Site. The remainder of the park forms the official World Heritage Buffer Zone. Today, the Nelson's Dockyard National Park is home to vibrant communities, pristine conservation zones, and an internationally recognized yachting and tourism destination (Antigua and Barbuda National Park Service, Acts and Regulations).

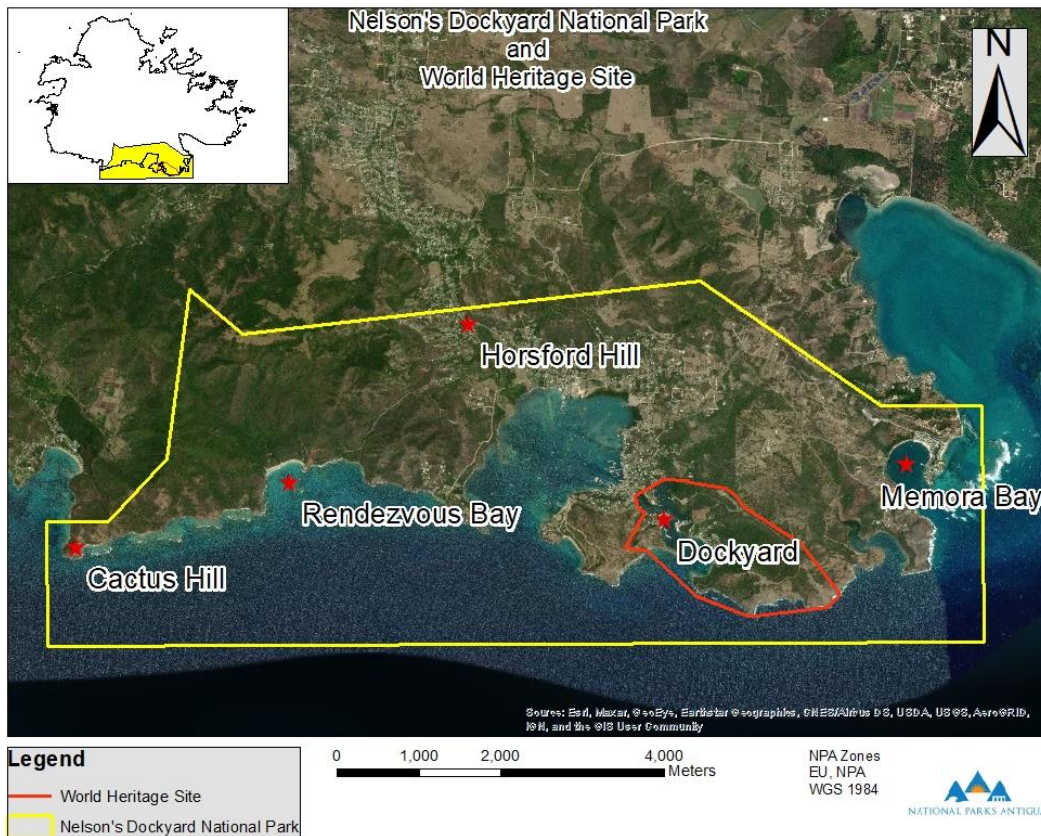


FIGURE 0.2. Map of the gazetted boundaries of the Nelson's Dockyard National Park including marine and terrestrial areas and the Antigua Naval Dockyard and Related Archaeological Sites. (Antigua and Barbuda National Park Service, 2022).

English Harbour became more important with the expansion of the Dockyard in the 1740s, and numerous fortifications were constructed to protect the naval installation. Dr. Christopher Waters (2018) researched and published valuable contributions on these heritage sites, many threatened by coastal and erosion (De Albuquerque & McElroy 1995). Site

visitations and baseline documentation of a sample of these forts was an important part of the field school activities.

An exciting centerpiece of the project was the excavation of Tank Bay wreck under the leadership of Dr. Jean-Sébastien Guibert. The shipwreck, located within the Antigua Naval Dockyard UNESCO World Heritage Site, has an illustrious global biography. Its legacy contributes vignettes to French, British, American, and Caribbean history. The wreck is believed to be the 900-ton vessel *Beaumont* built in 1762 for French East Indies Company trade in the Indian Ocean. When the company dissolved in 1769 the ship was deployed into French naval service as a fourth-rate-ship-of-the-line. In 1772 it left naval service and was purchased by a private citizen, Dessaudrais Sebire and Co., who renamed it *Lyon*, commanded by Captain Jean Michel, who carried out trade that supported the rebel patriots during the American War of Independence. A British ship *HMS Maidstone*, under the command of Captain Alan Gardener, captured *Lyon* off the Virginia coast on 3 November 1778 and took it to Antigua as a prize. Garner's report in the naval records describe *Lyon*, as a French ship of 40 guns, (viz.) 28 twelve pounders on her main deck, 6 six pounders on the quarter deck and 6 four pounders on the forecastle, staffed with 216 men, and commanded by Captain Jean Mitchell, from Virginia to L' Orient with upwards of 1300 hogsheads of tobacco. The engagement included mortalities on both vessels. Four were *HMS Maidstone* and eight killed and eighteen men wounded aboard *Lyon*. Both vessels incurred significant structural damage. *Lyon* was taken to Antigua as a prize venue. A 1780 map clearly shows the outline of a ship titled *Lyon* in English Harbour at the current location of the wreck. Enslaved divers who built and labored in the dockyard were probably involved in salvaging materials from the wreck through time. The dockyard was a significant Caribbean hurricane shelter and careening venue for repairing and maintaining ships.



Salvaged materials from older ships or wrecks, like well-preserved wood and hardware, were valuable recycled commodities (Guibert et. al. 2021:12-26; Cross 2020:613-640; Foy 2016: 6-35).

So far, the findings are compelling, but the collaborative team could only excavate a small portion of the wreck with the time and limited resources available. We opened three 2-meter (6.74 inches) square units in the bow, stern and midships and dredged into mud compacted with shells and concretions to depths around one meter. Currently our ECU team is analyzing the data we collected and writing our report. It is a significant case study of French allegiance and support of the rebel patriot cause in the American Revolution through continued shipping and trade despite the dangers. Identifying the wreck will provide a tangible and exciting centerpiece to highlight this intrigue for both scholars and the public to learn more about the social and economic dynamics with further evidence garnered from both historical documents and the archaeological evidence. We are planning a virtual conference later this semester to present our findings along with our Antigua and French West Indies partners. We hope to continue this productive and exciting research collaboration for future field schools and to seek grants to further our research capabilities.

## Section 1: Tank Bay Shipwreck

### *Historical Background*

The history of the ship *Lyon* is steeped in fascinating events and roles that will supplement future excavations and research. Built in 1762 by Francois Caro, *Lyon* started life as *Beaumont*, a 900-ton vessel spanning 145ft. and a breadth of 37ft. that was armed with 26 12-pound cannons. The French East Indies Company deployed it as a trading vessel voyaging between France and China until 1774 when it was bought by Alain Le Breton de Blessin and Guy Jean Dessaudrais Sebire, two major shipowners from Saint Malo who converted the vessel for slaving purposes (Guibert et al. 2021:16-17). *Beaumont* made its final trip to China between the years 1775-1777 before leaving to the America's where it was used as a blockade runner for the Continental Congress during the Revolutionary War.

Purchased by Jacques-Donatien Le Ray Chaumont in 1777, a powerful French aristocrat sympathetic to the American colony's war for independence who acted as the link between King Louis XVI and Benjamin Franklin, *Beaumont* was re-christened as *Lyon* with the intended mission of running the British blockades. With large decks that could be used as fighting platforms as well as sizable storage capacity, *Lyon* was the ideal vessel for breaking through British-held waters with supplies in bulk (Guibert et al. 2021:15-17). From here, *Lyon* is noted multiple times in the naval records of the Continental Navy carrying of trade goods intended for exchange between France and the Colonies, followed with a description of the eventual capture.

After its purchase for aiding the colonial cause, primary sources provide a detailed account of the vessel's lifespan up to its final encounter with the Royal Navy. The first of these records dates to 1777 in volume 10 of the Continental Naval records where a vessel by the name

of *Lyon* is mentioned within a message to Chaumont. It notes that it should be sold to him and was loading merchandise in France bound for the war effort in North America. Other noteworthy pieces within this source reveal discussions between Frenchmen about uses, direction, and accompaniment of men, arms, and other vessels to aid the *Lyon* during voyages (Crawford 1996: 962-998). The next mention of *Lyon* within these records appears in volume 11 where it is noted that *Lyon* was outfitted in December of 1778 with 40 guns, 200 men, and packed with goods from Europe and India. *Lyon* left from the Port of Lorient on the last day of the year with a smaller 20-gun French vessel in company and two other continental vessels. Its destination was Boston, with a large quantity of supplies as well as the intention to carry dispatches from the Continental Congress to France. *Lyon* never made it to this port and instead opted for Virginia. However, *Lyon* and another vessel of a comparable size were chased from the Port of Virginia for several hours by the Royal Navy which forced the convoy to redirect once again. *Lyon* finally entered the Port of New-London in March of 1778 in foggy weather with a cargo of salt and woolens for the rebelling colonies (Crawford 2005: 629-856). *Lyon* was expelled from several areas before and after arriving in New London by the Royal Navy but had many escapes before its final demise by *HMS Maidstone*.

*Lyon*'s final voyage begins within volume 12 where entries note that *Lyon* had nearly completed the sale of its cargo by April of 1778 and about to leave (Crawford 2013: 124). Shortly after leaving, volume 13 notes *Lyon* as "having fell in with an English Frigate (Crawford 2019: 154)." This encounter was a 14-hour running battle that took place against *HMS Maidstone* before *Lyon* capitulated. As *HMS Maidstone* was charged with suppressing all support for the Revolutionary War effort in North America, the capture of this vessel and its large consignment of tobacco, gunpowder and other warlike materials was a significant prize for

the Royal Navy crew and their Captain, Alan Gardener (Garnder 1776: 1). Over the course of the coming weeks, Gardener tried to sail his prize north where he could collect a much larger reward for his spoils in London, but was eventually forced to sail the damaged *Lyon* into English Harbour, Antigua (Guibert et al. 2021: 16-17). After offloading all valuables now to be used for the British war effort, *Lyon* was stripped of all parts to the waterline and scuttled inside the Harbour.

### *Project Archaeology*

The goals of this project, in relation to the broader research agenda, were to excavate and archaeologically record the site. Specific goals included: 1) The excavation of sediment, and seagrass overlying the shipwreck structure at both ends of the site and the estimated midships; 2) To identify the bow, stern, and the mast-step of the shipwreck site; 3) The collection of significant artifacts which might provide cultural or temporal affiliation; 4) Taking timber samples to identify wood species and potential construction origin; and 5) publication of a ECU class site report.

Dr. Jean-Sébastien Guibert Association Archéologie Petites Antilles (AAPA) in partnership with the University of Antilles permit holder for the Tank Bay wreck project, excavated the site the previous season to determine the outline of the wreck. A 47m baseline was placed along the exposed keelson with a nylon line and tape was attached to rebar at each end of the shipwreck. The French team strategically placed the units at the extent of the exposed keelson with the goals of more fully exposing the bow and stern of the shipwreck. Initially there was no vertical control, until the structure was uncovered. From there, it was the goal of both French and ECU teams to excavate each unit evenly to maintain the context of any cultural

material found on the site. Spoil bags were to be brought up after each dive to be sifted through for material culture.

## *Methodology*

### Excavation and Survey

Excavation proceeded in a 2x2 meter unit for horizontal control, placing 3 of these units at the 0-2 meters and 45-47 meters, strategically placing the second unit at 22-24 meters where the midship was exposed. The excavation site included a water induction dredge of 10-centimeter hose, galvanized steel head, and a Pacer IntekPro OHE eight-horsepower water pump. The sediment was collected and screened through a 1/4-inch mesh bag attached to the outlet hose of the dredge spoil. The French team consisted of the same dredge set-up; however, they had a rigid hose and two outflows. The outflow bags were placed approximately 6 to 8 meters away from the site, based upon the unit. At the end of each dive excavation session, the bags were removed and lifted to the surface for screening. Once systematically sorted, all artifacts were placed in a secure and labelled container to be stored in the office of the Director of Heritage Resources in Antigua and Barbuda, Dr. Christopher Waters.

With the French team already placing the baseline and units on the site, the ECU team was tasked with photographing, sketching, taking trilateration points of artifacts, and evenly dredging the units. Prior to initial dredging sessions, the ECU team had about 15 minutes dedicated to taking photographs, mud mapping, and measuring the exposed timbers. Once completed, excavation began. Each unit had a team of ECU divers, spending about 60 minutes underwater. The ECU dive teams consisted of one faculty member and two students, tasking one of the two students with dredging the given unit and switching each other out after 30 minutes.

### Photogrammetry

The French team conducted multiple dives to take photos for photogrammetry purposes for unit 1, 2, and 3 as they were being excavated during the project.

### Artifacts

Artifacts that were deemed diagnostic during the archaeological survey were drawn into their respective units using trilateration. After having the provenience of the artifacts documented, they were lifted to the surface where they were taken back to the office of Dr. Christopher Waters. Artifacts from the dredge spoil bag were sifted through on the floating barge with a quarter inch screen. Material culture recovered from this process was taken to Dr. Waters' office to be post-processed. During post-processing, artifacts were separated into two groups, diagnostic (ceramics, glass, bone, pipe bowls, etc.) and non-diagnostic (wood, lead slag, charcoal, ballast). Non-diagnostic artifacts were separated into categories, photographed with a scale bar, collected into bags filled with salt water, and stored in buckets for later reburial on the site. Diagnostic artifacts were photographed with scales and bagged individually. Typological, technological, and functional analysis of the diagnostic artifacts were completed prior to reburial and conservation. Dr. Waters initiated the conservation process of designated artifacts. A section of wood from the shipwreck was brought to surface with the intentions of being used to collect wood samples by the French team.

### Reburial

The metal rebar used to establish the baseline remained in the sediment as reference points for future field work. The intentions were to rebury the site, though the ECU team did not participate in the reburial process. The French team placed non-diagnostic material on site for reburial while diagnostic artifacts are being conserved by Dr. Chris Waters.

## Paperwork

There were several forms that were used for recording data throughout the field season. The forms include participant field notebooks, photographic logs, artifact inventory, and proformas. The ECU proforma of the 10x10 excavation units was used in the field, while the French team's artifact proforma was used during inventory. Through these various forms, data was recorded and collected efficiently, and was also digitally uploaded to the drive.

## Conservation

Dr. Chris Waters oversaw all conservation-related activities. The process for conserving diagnostic materials is an on-going desalination process. Materials for curation (buckets, plastic bags) were provided by ECU and the Heritage Office.

## *Excavation Units*

### Unit 1

Unit one on the Tank Bay Wreck was situated on point A of the established baseline at zero to two meters. The two-meter grid square was separated into four quadrants, a through d, in which corners a and d were on the baseline. At the beginning of excavations structure was visible in quadrants a and d, and ran parallel to the baseline as well as several loose metal objects were located in quadrant b. In a team of three, consisting of two students and one instructor, one excavated with the dredge while the other two assisted with monitoring the dredge spoil and the collection and recording of artifacts encountered. As the team went down, they kept the unit level and completed trilaterations upon the artifacts uncovered. Some frames became exposed in the wall of quadrant b after bringing the level down, but they only slightly protruded into the unit

and continued eastward of the baseline and unit. After further excavations, the structure was more exposed in quadrant c, although most of the structure remained in quadrants a and d and loose metal artifacts that were often found in b and c quadrants.

The largest focus was upon the structural components of the wreck with the aim of distinguishing the way the vessel was oriented. In turn, towards the latter part of excavations, the unit was expanded west of the baseline in order to expose more of the structural components. As the team proceeded to dredge down, the keel was positively identified and possibly the keelson as well. The intention for the project was to locate the bow and the stern of the vessel and excavations confirmed that unit 1 was in fact the location of the bow.

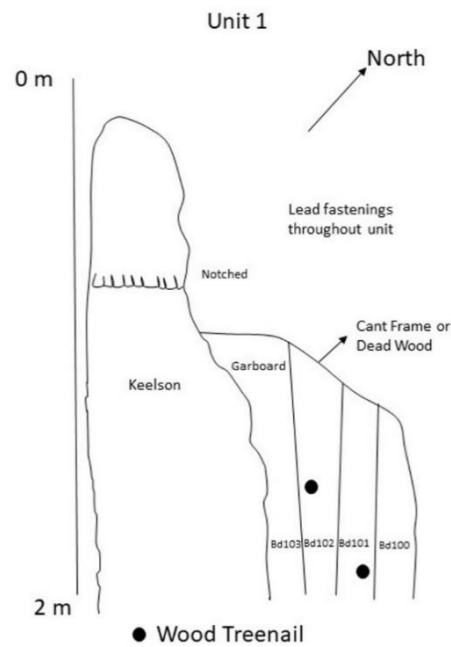


FIGURE 1.1. Unit 1. Not to scale (Digitized by Levi Holton, ECU, 2022).



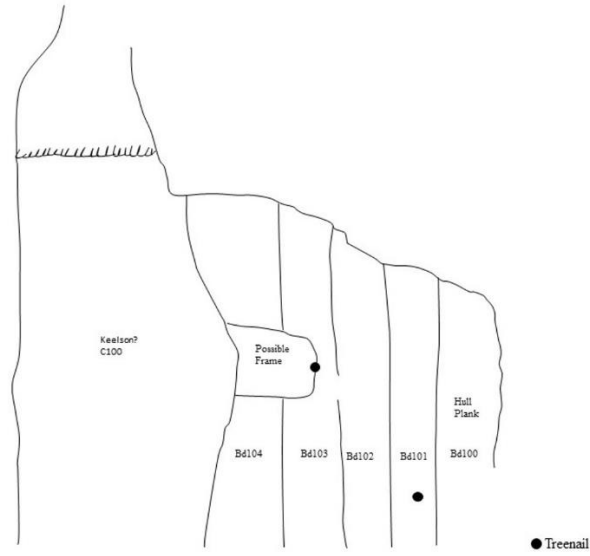


FIGURE 1.2. Unit 1. Not to scale (Digitized by Levi Holton, ECU, 2022).

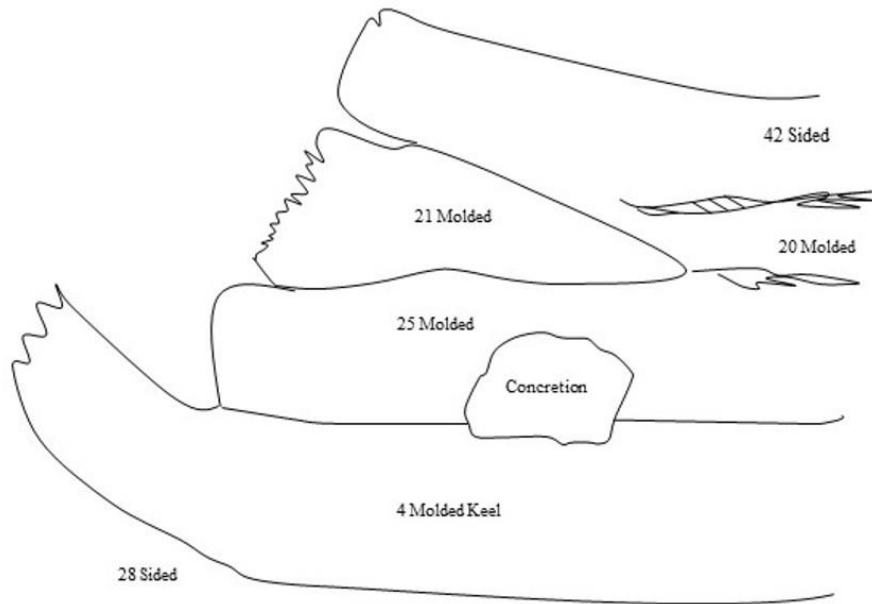


FIGURE 1.3. Unit 1. Not to scale (Digitized by Levi Holton, ECU, 2022).

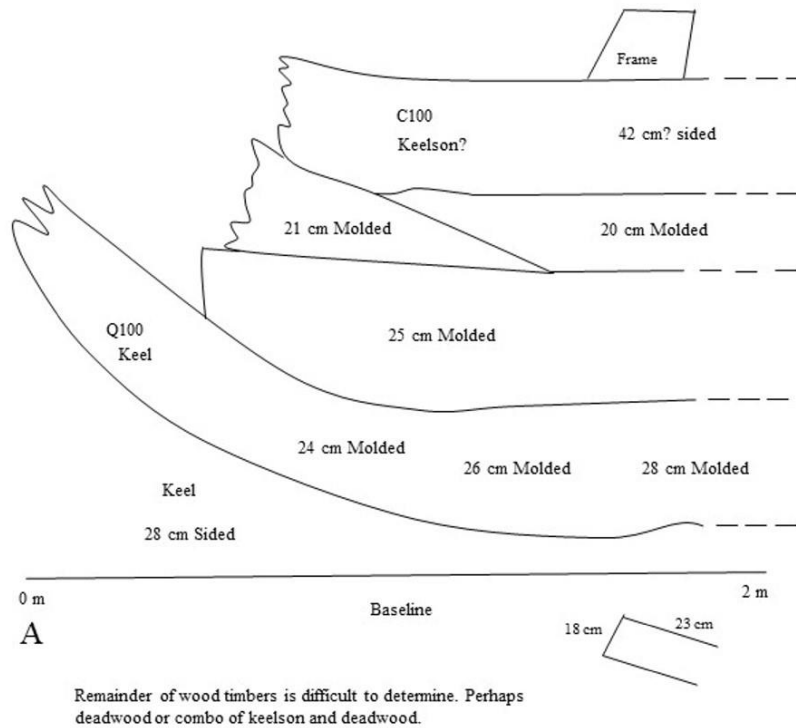


FIGURE 1.4. Unit 1. Not to scale (Digitized by Levi Holton, ECU, 2022).

## Unit 2

Along the 50 m baseline, unit 2 is found midship between the bow and stern. A presumed modern anchor resides on the port side of the baseline with no affiliation to the wreck. The offset continues on the starboard side for an additional 15 m with datums (e, f, i, j, g and h). The dredging in unit 2 was extended for an additional 15 m in effort to collect the approximate midship width. The cleaning of seagrass and mud was necessary to reveal datums a, b, c and d that show the keel, keelson, planking and frames of the wreck. When looking at datums e through h, there is a large collection of ballast stones surrounding the timbers.

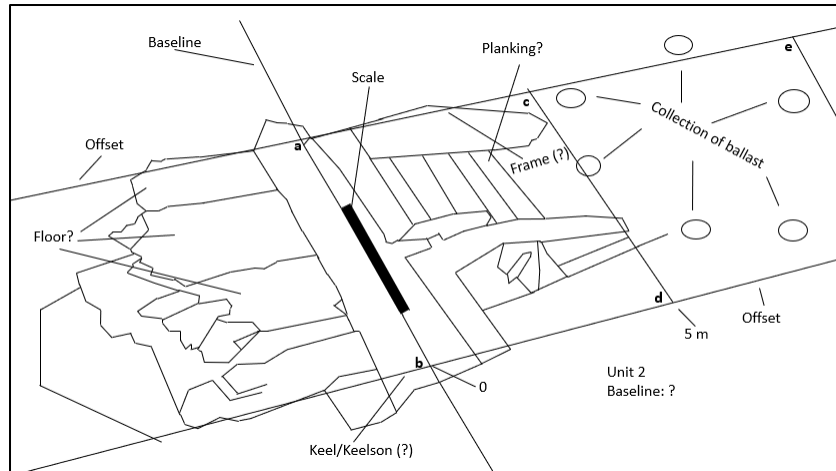


FIGURE 1.5. Working Traced Digitized Model of Unit 2 (Image by Logan Willis, ECU, 2022).

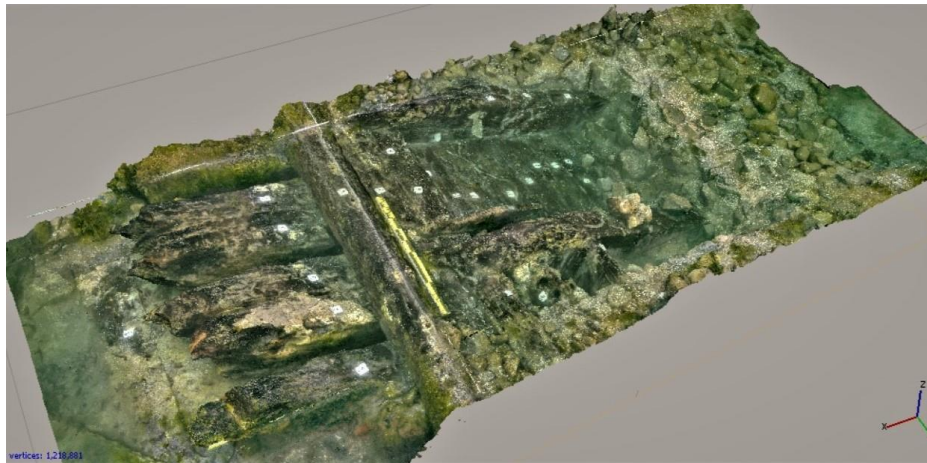


FIGURE 1.6. Photogrammetry Model of Unit 2 (Image by Claude Michaud, Association Archéologie Petites Antilles).

### Unit 3

Unit 3 was placed at what was expected to be the furthest southern extent of the site along the south-southeast by north-northwest orientation of the wreck based on observations made during the previous field season (Guibert et al. 2021:23-30); the intent being to discern which end of the wreck was the bow or the stern and document its structure. Placed between 44m and 46m and protruding approximately west-southwest (later determined to be the port side) on the established baseline, the unit consisted of a 2x2m square outlined by segments of 2-inch diameter polyvinyl chloride (PVC) pipe fit together. This was divided into 1m square quarters by

two high-visibility pink lines pulled taut and strung perpendicular to one another from the center of each side of the square to form a grid. The corners of this PVC frame were placed at a fixed height with four 1/4-inch diameter bar driven into the substrate to hold the frame in place and act as a vertical reference point for the subsequent excavation. Like other units, each 1x1m quadrant was labeled a, b, c, or d respectively beginning from the bottom left corner and continuing clockwise with a and d being the quadrants along the baseline. These labels were written in permanent ink on ear tags (for livestock) which were also affixed to the rebar at the corner they labeled.

Before excavation, the unit was covered in seagrass, removed by hand and placed into the dredge to be screened along with the rest of the spoil. During the project, divers dug up the substrate by hand-faning into the dredge in even layers, continuing around structure and features encountered. Each unit level was defined by the date and sequential number of that excavation for that day. The levels were therefore varied in depth depending on the progress of each diver, averaging about 5 cm per dive.

During the second half of the project (Wednesday October 26<sup>th</sup>, 2022) the structure became defined enough to allow project leadership to make more precise decisions about where best to excavate to answer the established research questions, namely, to determine the type, extent, and depth of the vessel's construction. As a result of this, efforts in unit 3 shifted focus from a general even excavation to the deepening of an approximately 20cm wide trench laid along the structure across the center of the unit parallel to the baseline. By the end of the project, the trench reached a depth of roughly 18 ft. (based on dive computer observations) and reached the bottom edge of what timbers were connected to the keelson above.

As a result of these excavations, the confirmed stern construction of the vessel could be thoroughly documented. Structural pieces of the sternpost were located along the baseline. Large sections of lead sheathing that were bent and contorted were found at the center of the unit and within the northern section of the unit, between datum 'a' and 'd.' A section of the keelson, approximately 40cm wide, was uncovered. A separate timber was found adjacent to the keelson that had lead sheathing towards the end nearest datum 'a.' This timber is believed to be a section of the stern post assembly and measured approximately 40cm by 40cm from a plan view perspective. Attached to the stern post was a large, concreated piece of metal that appeared to be the gudgeon. The gudgeon was an eyelet affixed to the base of the stern post where the rudder would be secured using a pintle. Other gudgeons and pintles were placed further up on the stern post so that the rudder was secured and could swing freely (Dear & Kemp 2005:250-1). Attached to this gudgeon was a large section of wood that is believed to be part of the rudder. This section of the rudder was approximately 120cm by 40cm from a plan view perspective. Large sections of the rudder still have lead sheathing wrapped around it with loose pieces of lead sheathing around that section of the unit.

Smaller artifacts were in this unit that could potentially provide context for dating the wreck. Among these was a glass bottle neck, measuring 67mm from the base of the lip, the lip measuring 9mm, and the width of the neck was 37.5mm. Two sherds of feathered creamware were found in the unit, one a base sherd and the other a rim sherd.

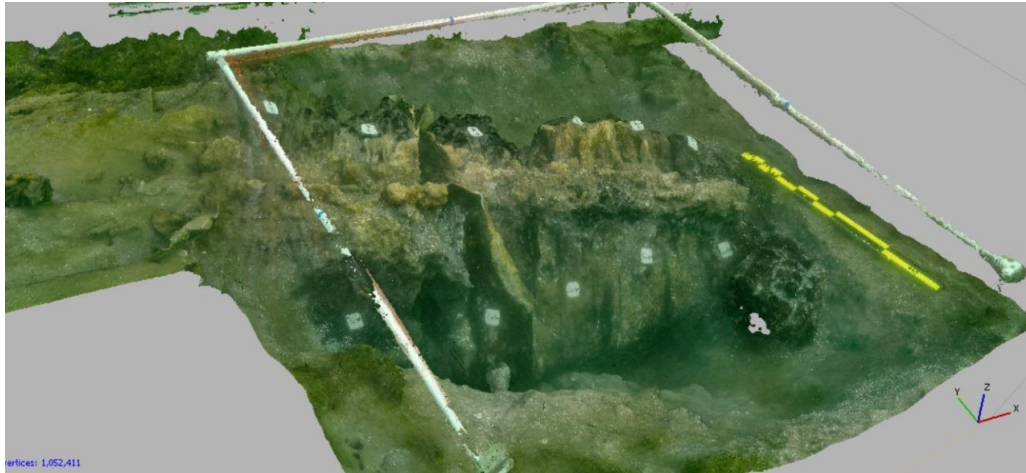


FIGURE 1.7. Photogrammetry Model of Unit 3 (Image by Claude Michaud, Association Archéologie Petites Antilles).

### *Artifacts*

#### Artifact Assemblage

Excavation of the Tank Bay Wreck yielded a fascinating artifact assemblage that appears to be conducive with the material that was anticipated to be found aboard a vessel such as *Lyon*. Commonly found non-diagnostic objects in the assemblage included large amounts of coal and charcoal, lead sheathing, and wood fragments from the remains of the hull, and concretions that have yet to be examined for any material they may hold. These objects are supplemented by fascinating artifacts of a diagnostic nature that included wine bottles, glass, differing types of ceramics, a pipe stem and bowl, gunflints, a metal anode, animal bone, and fishing weights that can help to provide a possible date range for the Tank Bay Wreck.

#### Recovery Procedures

The Tank Bay Wreck is a relatively shallow wreck located in 3-4 meters of calm water that is relatively clear so long as silt deposits surrounding the ship remain undisturbed. The strategy concerning the recovery of artifacts on site involved the use of divers working in shifts

across 4 units that divided the wreck into sections from bow to stern that were intended to be excavated using dredging and hand fanning methods. While divers were encouraged to photograph any objects they discovered in situ, any other objects of special significance were placed in plastic bags while still underwater and brought to the surface separately.

All other artifacts found on site were brought up using two dredges working in different units of the wreck at any one time. Using large mesh bags clipped to the end of the outtake pipe of the dredge, all spoil was identified using a tag in the bag with the following information:

- Tank Bay Wreck
- Date
- Unit and Level
- Artifact Identification

Upon bringing it to the surface, all spoil from the selected bag was placed into a sifter located on the wooden platform floating above the site and cleaned off with buckets of salt water to see any possible objects more clearly. Once cleaned, individuals at the sifter began to comb through the spoil to locate objects of significance and divide similar artifacts into groups. For temporary storage, all artifacts of the same types were placed in the same plastic bags before being placed together in one large plastic bag. Each small bag was provided with a tag of the same information as previously disclosed while the larger bag was also given its own tag containing the same information.

All artifacts brought up from the days of excavation were either identified as “diagnostic” or “non-diagnostic” artifacts. While diagnostic objects were any materials that could help to provide a date range for the Tank Bay Wreck, all non-diagnostic artifacts were items that were unable to provide dating information or were not significant enough to warrant long term conservation efforts. All diagnostic artifacts were planned to be kept at English Harbour with

minimal conservation efforts to maintain the current condition of materials that were raised from the site while non-diagnostic artifacts were to be reburied in their original positions on site as delineated by the bag they were contained within.

### Documentation

After each bag had been accounted for, each artifact was provided with measurements and photographs the following day. Each object was provided with measurements (length, width, and thickness) and a sketch within each field notebook prior to final storage or reburial. This was rounded off with an infield photo for all artifacts was typically completed with a smart phone and scale. In the case of artifacts that came in multiple pieces, a count was also given.

After completion of initial measurements, more significant objects moved on to an official photography station for professional photos. Each object of special significance or diagnostic nature was placed with a scale and artifact tag within a white foldable studio that was complimented with lighting. After several perspectives of the objects were completed, it was logged within a record sheet that included the folder it was logged in as well as the identification numbers of the photos that were provided to us by the camera that was used. This made the process of finding specific artifact photos easier when they were called upon. While artifacts that were provided in field photographs were placed back in the original bag and storage area they were pulled from, artifacts selected for official photography were placed within buckets that had been made to separate those that had and hadn't been photographed.

In the case of non-diagnostic artifacts, each object was divided into specific buckets to identify that documentation had been completed. This was accomplished with 4 buckets labeled to hold artifacts from each of the 4 units that the wreck had been divided into. After the object



had been photographed, it was placed within one of these buckets based on where it had come from originally to signal that all documentation had been completed and it was prepared for reburial. Other artifacts of a more significant nature were placed within buckets with labels that specified they had been photographed along with the date they were raised from the wreck to be transferred back to their original bucket at a later date to free up storage for other artifacts undergoing the same process.

### Storage

As new artifacts in need of the same documentation process were being recovered every day, a quick storage strategy was needed to prevent valuable objects from being lost as new artifacts were added. This was accomplished using buckets filled with saltwater from the Harbour that were organized based on the day the objects were brought in. Upon the return of the dive boat with new artifacts, a bucket(s) had been prepared with tags indicating the date and their association with the Tank Bay Wreck.

All objects were left in the plastic bags they were originally placed in from the dive boat and were also filled with water from the Harbour prior to being stored within their designated buckets. Newly found artifacts that were deemed of special significance were the exception to this rule and were provided with their own smaller bucket that was not identified by day. As these objects were often requested for tours, measurements, and photos, these artifacts were provided with their own tags and placed in a smaller casing filled with salt water identified as “significant artifacts” that could quickly be tabbed through to find the desired piece.

## Reburial

Reburial was accomplished using bio-degradable mesh bags that were each reserved for non-diagnostic from a single unit to be placed within. Once divers returned the bag with all objects to the unit they were discovered in, the site was filled back using the dredge that had been used to uncover the wreck. In the case of more significant diagnostic artifacts, the use of RO (Reverse Osmosis) water or a mixture of RO water with 2.5% sodium carbonate was recommended to maintain the condition of these artifacts over the foreseeable future to prevent cracking from saltwater permeation and to begin the desalination process. All objects were then moved to a small storage shed in English Harbour where they can be accessed for future research and projects.

## Dredge Spoil

The two dredges implemented during this excavation were the primary tools used to uncover the remains of the Tank Bay Wreck. As the collection of all small artifacts by hand would have proved nearly impossible, most small artifacts resided within the bags of spoil recovered by divers who used one of the two to begin clearing their respective units of silt. These bags of spoil yielded a plethora of both non-diagnostic and diagnostic artifacts that helped the field school in the collection of evidence to help either confirm or deny the identity of this wreck as *Lyon*.

## Non-Diagnostic Artifacts

Items collected during sifting activities included many wood fragments as well as iron sheathing. The small wood fragments typically ranged in sizes between 5-15 centimeters in length and are most likely a post depositional result of the Tank Bay Wreck deteriorating over

the course of the last 244 years. These wood fragments appear have yet to be identified and were found across all 4 units of the site. The large amount of wood fragment finds are contrasted by the high number of iron sheathing found within all spoil brought up from all 4 units of site as well. These fragments ranged from 2-30 centimeters in length and could help to tell additional information on the state of the vessel at the time of its sinking. Possible uses of this iron sheathing could have included additional protection over certain parts of the vessel that were critical to its function as well as serving to fix excessive damage or deterioration which a high level of iron sheathing found on a site such as this could suggest.

#### Diagnostic Artifacts

Items found within dredge spoil of a more significant nature that could aid in the dating and identification of the Tank Bay Wreck includes:

- Pipe stem and bowl that do not appear to be a part of the same pipe
- Gunflints
- Various types of bone from rats, cow, pig, fish and turtle
- Copper alloy anode
- Different types of glass from wine bottles as well as a medical bottle
- Grape shot
- Musket ball
- Trigger guard



FIGURE 1.8. Pipe bowl from Tank Bay Wreck. (Photo by Nicholas Baker, ECU, 2022.)

The surface of the bowl remains relatively white and was found in fairly good condition. Included on the surface of this bowl are several engravings that depict a sun, a rose, and the possible makers mark of the individual responsible for making this object. Identifying this bowl could help to place the age of the wreck within a 1-2 year date range and help to either confirm or deny the assertion of these remains as *Lyon*. The shape of this pipe appears to match typical shapes of clay pipes taken within the late 18th to early 19th centuries that can be found below. Possible comparisons that could be made to this bowl include the clay pipes found on the site of a Dutch 18th-Century East Indiamen as well as a late 18th-Century inn from the Middlesex that can be found alongside the previously made comparison. Both these instances can help to place the wreck roughly within the period that *Lyon* would have existed. The next step in helping to determine a precise age of the vessel is the identification of the markings of the pipe that are still currently being researched.

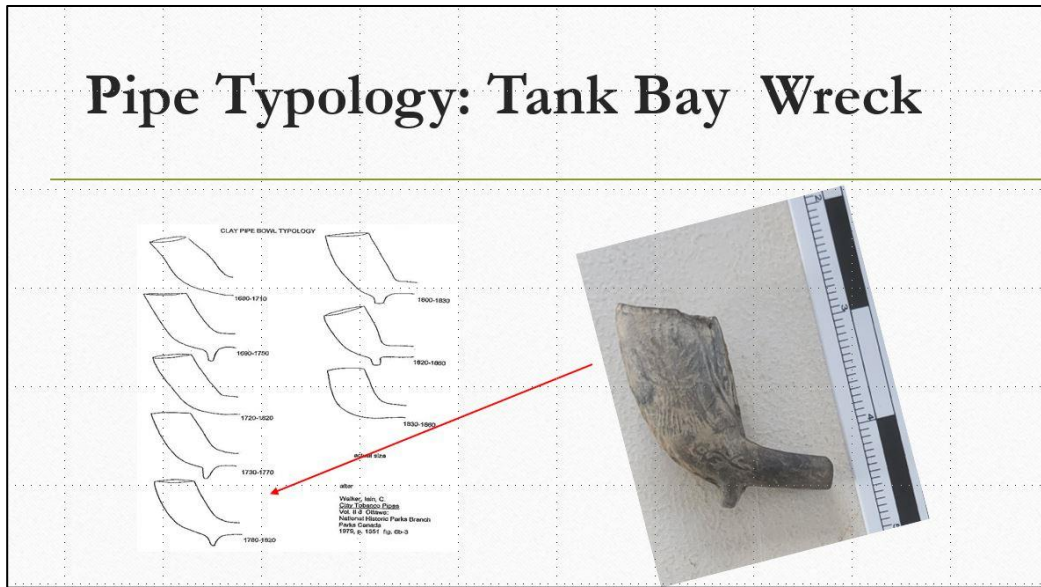
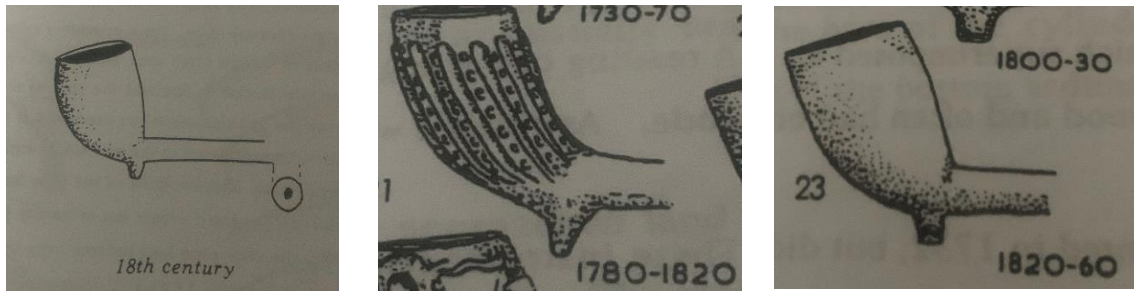


FIGURE 1.9. Typical 18<sup>th</sup> and 19<sup>th</sup> century pipe bowl shapes. (Hume 2001)

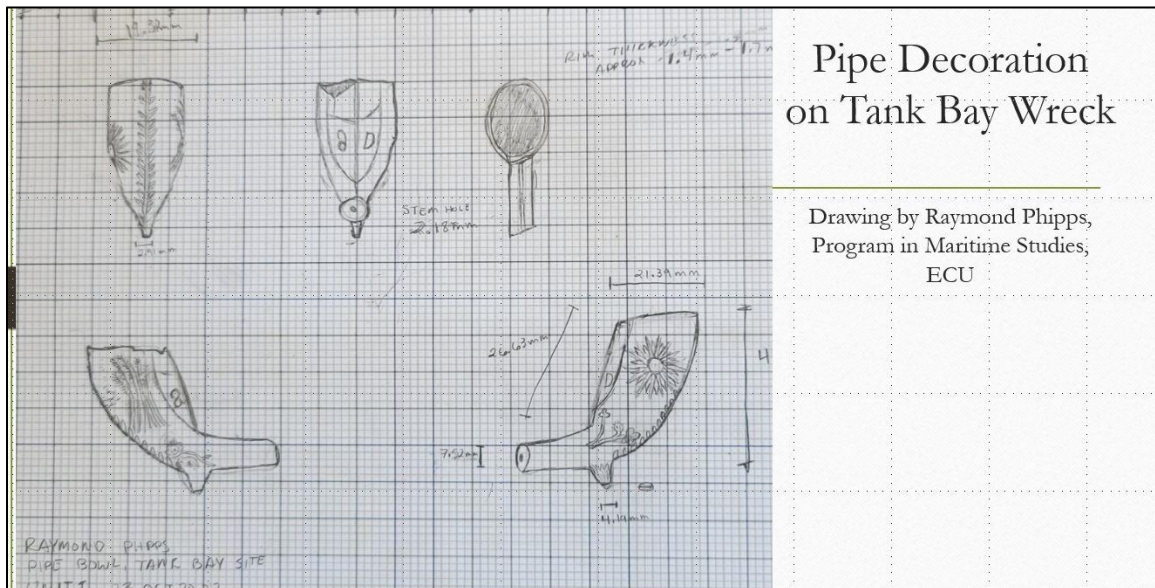


FIGURE 1.10. Drawing of pipe bowl decoration (Drawing by Raymond Phipps, ECU, 2022)



FIGURE 1.11. Chert or possible gun flint from Tank Bay Wreck (Photo by Ian Dunshee, ECU, 2022)

The discovery of two possible gunflints suggests the presence of small arms aboard the Tank Bay Wreck which aligns with the role of *Lyon* as a blockade runner that was in need of considerable weaponry to protect the contents of its cargo. These flints appear worn and flat on one side and are 3-5 centimeters in length. They appear to be in a highly worn state as compared to other flints of the period that possess a more squared appearance that may have experienced less usage or deterioration. Possible comparisons to these flints include English flints from this period appear a similar color but are not degraded to the level in which this suspected flint is. French comparisons do not match this style and appear a much brighter color.

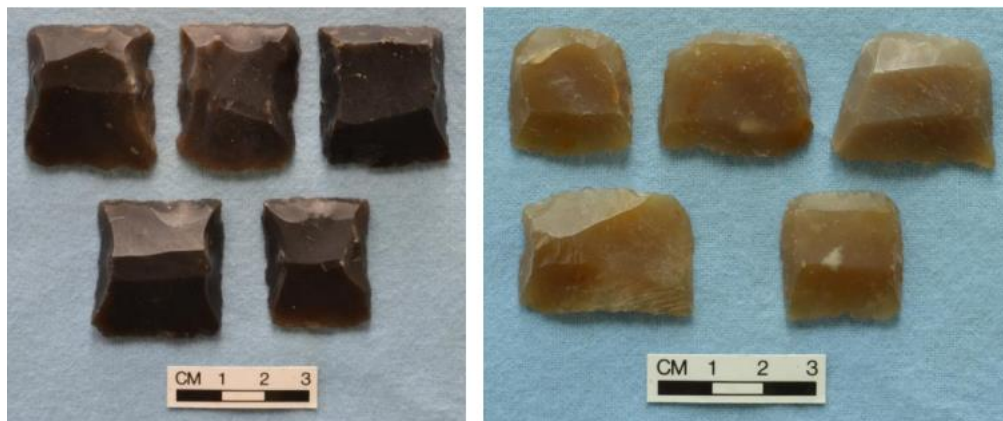


FIGURE 1.12. Typical blade-based gunflints. *Left*, 'Black' British gunflints from the Royal Armoury, Kathmandu, Nepal. *Right*, 'Blonde' French gunflints collected by an amateur in Ohio, USA (Ballin, 2014).



FIGURE 1.13. Top interior view of wine bottle base recovered from Tank Bay Wreck. (Photo by Nicholas Baker, ECU, 2022).



FIGURE 1.14. Base view of wine bottle base recovered from Tank Bay Wreck. (Photo by Katelyn Rollins, ECU, 2022.)

As a common item often brought on many French vessels, the discovery of wine bottle remains such as this are one of several ways in which this wreck can be both dated and identified. This base is in poor condition and has been completely separated from the rest of the bottle with its most prominent feature being the inward taper at the bottom that resembles several styles of bottle during the 18th Century. The base of this object was most likely made using a pontil technique which incorporated the use of a long rod in the finishing stages of wine bottle construction and hold it in place after it is released from the blowpipe (Schulz et al., 2016: 103).

While a determination of the nationality of this object has not yet been made, it does align with typical examples of 18th-Century pontil marks as can be seen in the image below and align well with other objects concerning the Tank Bay Wreck’s identity as an 18th-Century vessel.

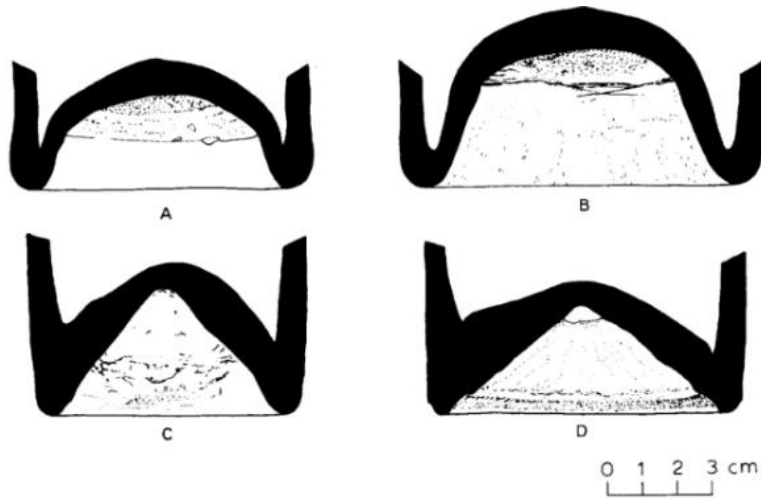


FIGURE 12. "Wine" bottle bases with sand pontil marks: a) and b) 18th century; c) late 18th, early 19th century; d) 19th century.

FIGURE 1.15. Typical 18th and 19th Century wine bottle bases. (Schulz et al., 2016).

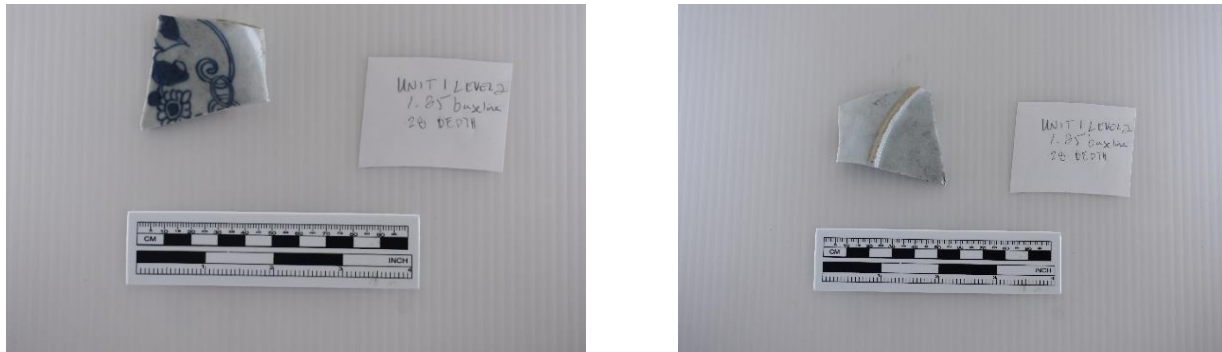


FIGURE 1.16. Tank Bay Wreck Chinese porcelain with blue floral design. (Photos by Nicholas Baker, ECU, 2022.)

Many different styles of porcelain, ceramics and pottery were discovered during the excavation of the wreck of Tanks Bank Bay, which can help provide a plethora of dating information and the type of cargo transported. Of these shards, a small porcelain piece touting a blue floral design is perhaps one of the most unique within this part of the assemblage. This



portion remains in good condition with designs that can be clearly seen. Other examples that can be used to compare this piece includes pieces found on the wreck of an 18th-Century VOC vessel as well as the Chinese *Xiaobaijiao I*. In both these instances, these wrecks were found with the remains of blue porcelain that resemble the piece found with the Tank Bay Wreck which speaks to the truly global nature of this material. This similarity also helps to align the vessel more closely within the 18th Century to move towards confirming its identity as *Lyon*. Discovering these objects could suggest either the men or the vessel itself was one which traveled great distances as these pieces have been found far from their place of origin, an idea that fits within the history of *Lyon* perfectly.

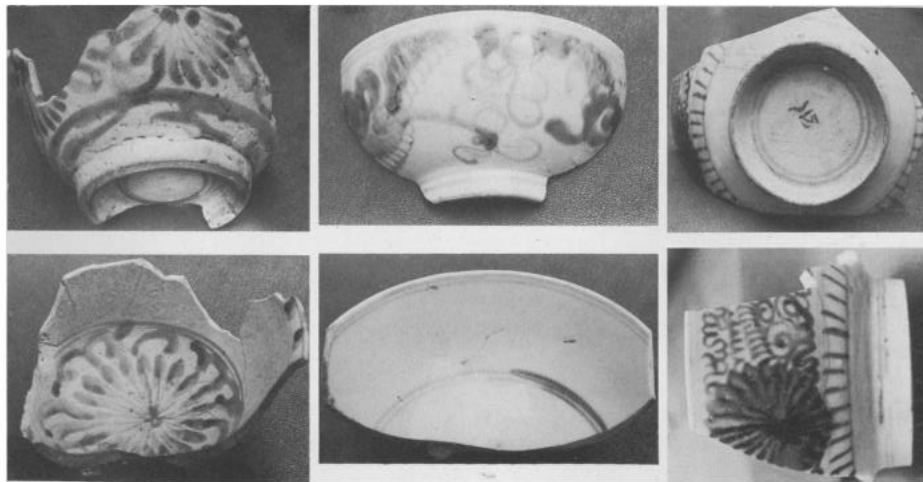


FIGURE 1.17. An 18th century Dutch East Indiaman, found at Cape Town, 1971. The International Journal of Nautical Archaeology and Underwater Exploration 5.4(1974): 305-316.

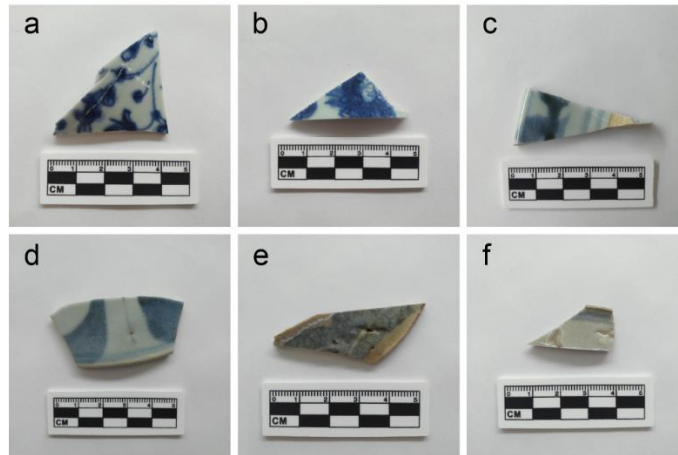


FIGURE 1.18. Chinese export porcelain in the middle Qing Dynasty: Study on the blue-and-white porcelains excavated from the “Xiaobaijiao I” shipwreck. *Journal of Archaeological Science: Reports* 38(2021): 103024.

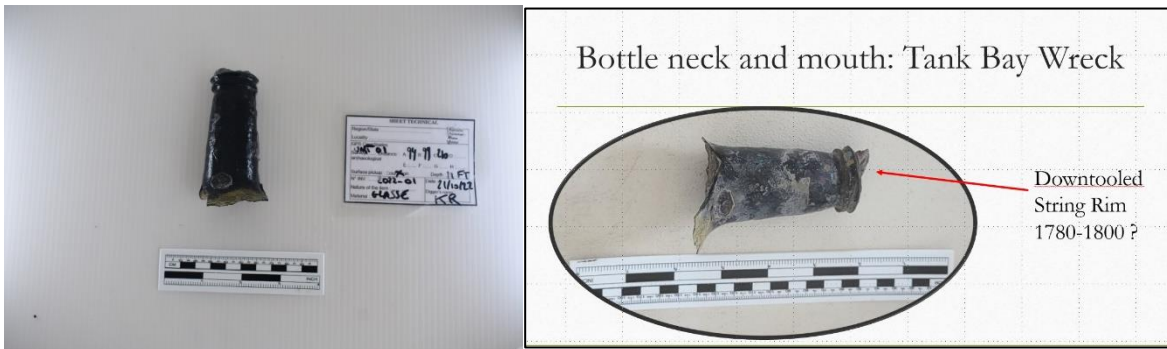


FIGURE 1.19. Wine bottle neck and upper shoulder recovered in Unit 1. (Photo by Nicholas Baker and Lynn Harris, ECU, 2022)

Included in the increasing list of glass and alcoholic related items on the Tank Bay Wreck is a 5-10cm bottle neck that is believed to be French in nature. The discovery of only wine bottles on the site suggests this wreck to be French in nature as vessels of other nationalities did not prefer a drink of this type on board. The key characteristics that provide this information is the olive-green color as well as the lip at the top of the neck. This object has been broken off from its base and appears to be in fair condition. Potential matches for this piece include a bottle

found at an 18th-Century Inn in Middlesex that has a similar top to the one depicted. This idea helps to place the wreck within the correct 18th Century time period once again. Other similar objects to this neck also include an American onion bottle constructed in the 18th Century as well as a British beer bottle found on the wreck of *Mardi Gras*. Although the Tank Bay Wreck is suspected to be of French origin, the bottle neck appears to match typical examples of English wine bottles within the time period *Lyon* sailed. While this is only a tentative identification, this assertion presents the idea of this object originating from the men who worked to salvaged *Lyon* after its capture. Possible matches to the shape of this bottle neck could date this piece within the early 19th to early 18th Century. Both comparisons can be found below.



FIGURE 1.20. British beer bottles found on the wreck of *Mardi Gras*. (Ford, 2017).

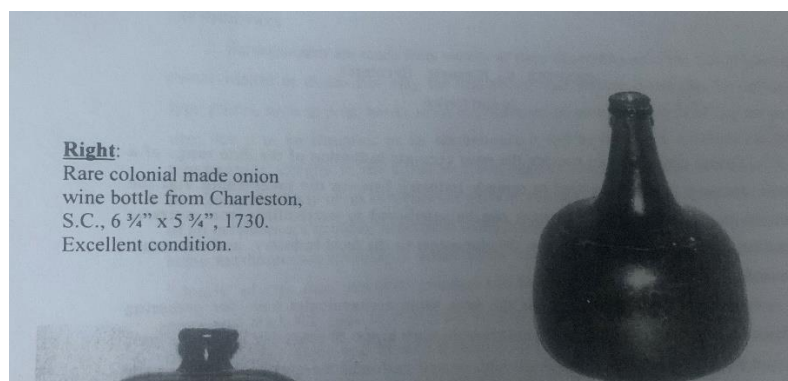


FIGURE 1.21. Image of 18th-Century colonial onion bottle (East Carolina University, 2022).

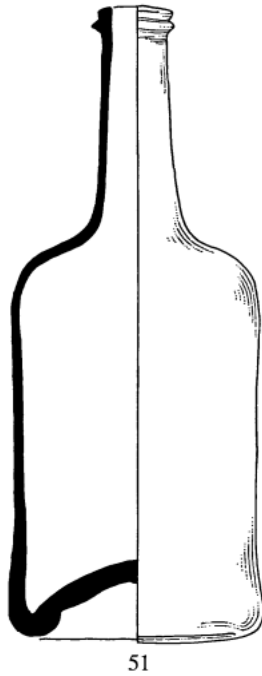


FIGURE 1.22. Glass Wine Bottle recovered from an 18th-Century inn from Uxbridge, England (Pearce, 2014).



FIGURE 1.23. Rat Bones in Unit 1 (Photo by Nicholas Baker, ECU, 2022)

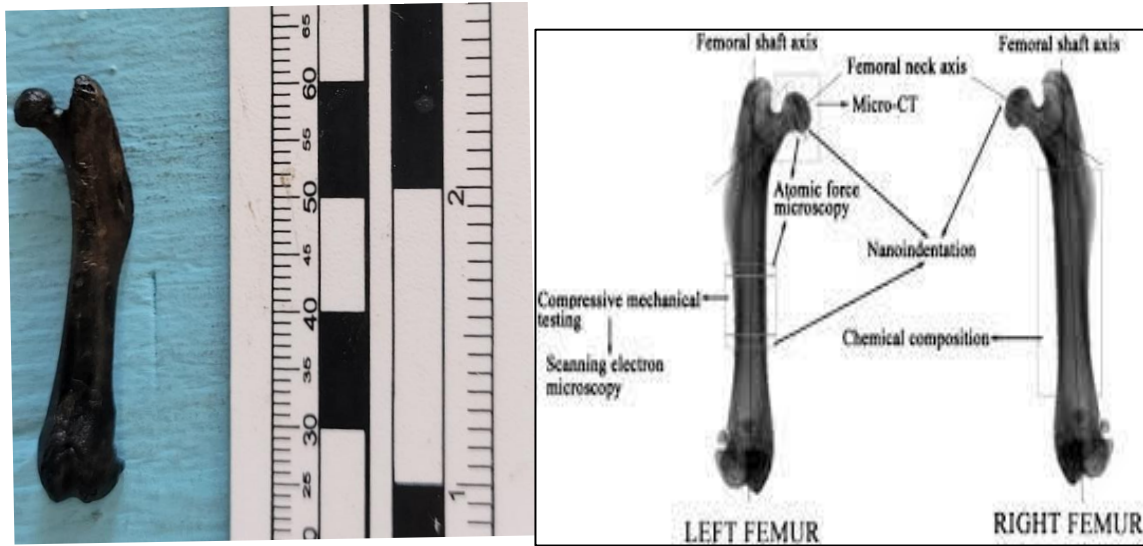


FIGURE 1.24. Rat Femur from Unit 1 (Photo by Lynn Harris, ECU 2022).

Among the many identifiable faunal remains recovered from the Tank Bay wreck are several rat bones recovered from Unit 1. While some are fragmentary, others are complete diagnostic bones, like the pictured femur. Rats have been a common inhabitant of ocean-going vessels throughout history, and when subject to full zooarchaeological analysis can provide critical information relating to the origin of the vessel, or the ports it visited. When analyzed alongside other faunal remains present on a wreck, evidence of rat bite marks can indicate food which may have been consumed by the unwanted rodents aboard a vessel rather than its intended sustenance for crew members ([Queen Anne’s Revenge Project 2017](#)).



FIGURE 1.25. Fishing Weight from Unit 3 (Photo by Lynn Harris, ECU, 2022).

An interesting group of artifacts recovered from Unit 3 are lead objects identified as likely fishing weights. Averaging around five centimeters in length, these artifacts have a twist or spiral in their construction, with a crevice running down the center, potentially used for the attachment of line. Similar artifacts have been recovered and interpreted as fishing weights from the site presumed to be the final resting place of Blackbeard's flagship the *Queen Anne's Revenge*, also an eighteenth-century vessel (Queen Anne's Revenge Project 2020). At present, no typologies have been created for lead weights from the period, and the artifacts remain an area in need of further study. While the objects recovered from the Tank Bay wreck most closely resemble what have been identified as fishing weights from other sites, somewhat similar lead objects have been interpreted previously as scale balancing weights (Meide 2015:383), and it is possible the objects could have served alternative purposes.



FIGURE 1.26. Musket ball from Unit 3 (Photo by Lynn Harris, ECU, 2022).

One significant artifact recovered from Unit 3 is an intact lead musket ball. With a 0.59-inch diameter, it is smaller than typical .68-70 caliber "Brown Bess" British military issue musket balls used during the American Revolutionary War, though it could possibly be British shot belonging to a smaller arm. Being nearly 0.60 inches in diameter (a discrepancy which could be the result of photo distortion, or degradation of the musket ball), it is more likely shot

belonging to an eighteenth-century French Charleville musket. Further analysis of the marks visible on the musket ball would be required to determine whether these represent the smooth bands and scars of a fired musket ball, or simply environmental damage incurred post-deposition. The musket ball lacks the severe indentations and distortions to shape found in musket balls surgically removed from wounded combatants. An important diagnostic element of musket balls is the density; as weights were not taken of the musket ball, complete analyses and positive identification is not possible at present (Sivilich 1996:103-107).



FIGURE 1.27. Creamware with feather edge rim design from Unit 3. Diagram in Hume 2001. (Photo by Lynn Harris, ECU).

Of the ceramics recovered from the Tank Bay wreck, one of the most diagnostic pieces is was found in Unit 3. It is a roughly eight-centimeter-long portion of the rim to a piece of feathered edge creamware, alongside an additional base piece from the same plate, though lacking the easily identifiable features of the rim. Creamware was a popular English produced ceramic that saw widespread distribution throughout the areas of British imperial influence. Though most associated with the 1780s and 1790s in the historical record, creamware was produced from 1762-1900. Relief molded creamware, like the feathered edge visible in the

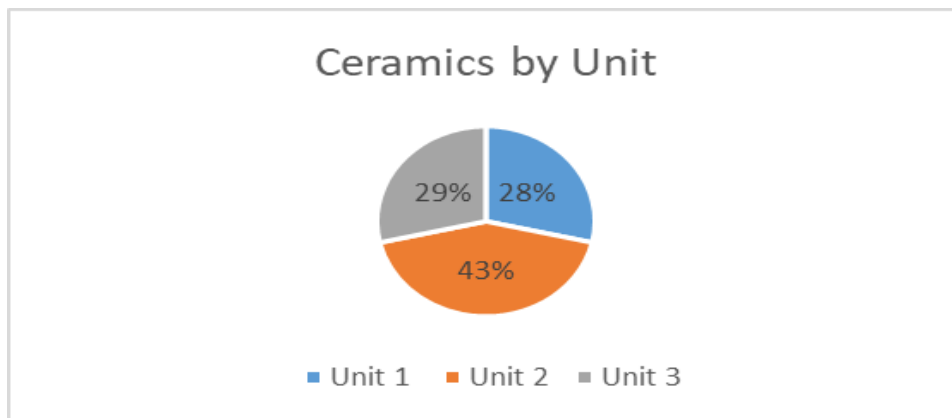
recovered ceramic, was produced from 1762-1785. Giving the piece an even tighter date range, the blue hand-painted variety came about between 1765 and 1780, consistent with the suspected identify of the Tank Bay vessel as the *Lyon (ex-Beaumont)* (Lloyd 2018:25-28).

### Artifact and Organic Materials Distribution Graphs

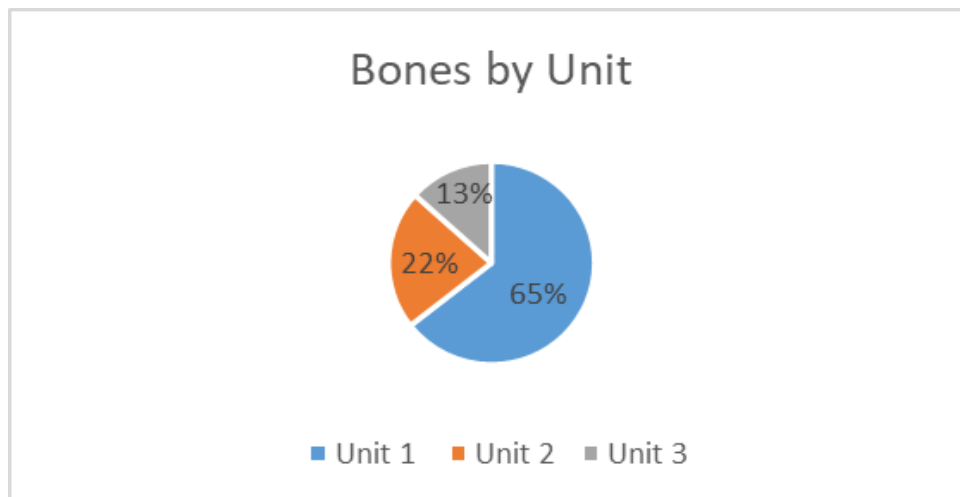
A breakdown of artifact types by percentage in units 1 to 3 displays the following trends:

#### UNIT 1

Unit 1 contained a total of 205 recovered items. It comprised 125 non-diagnostic wood fragments, 35 concreted ballast stones, 11 carbonized wood fragments, 16 metal fragments, 9 bone fragments, 4 ceramic items, 2 glass sherds, and 3 non-identifiable materials. This unit in the bow area contained 43% of the ceramic sherds and 65% of the bone fragments of total assemblage in the three units.

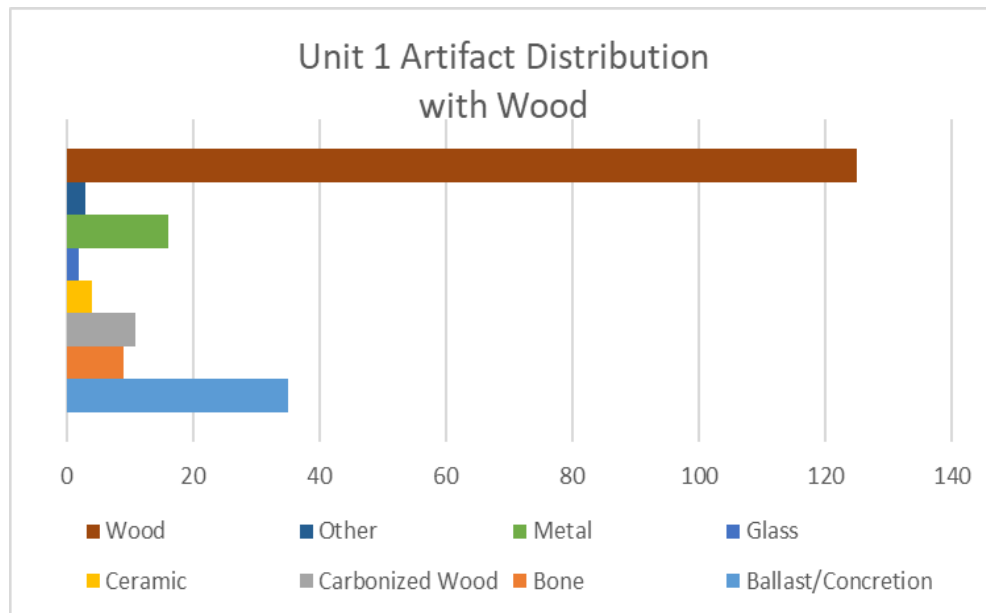


GRAPH 1.1. Ceramics by unit (Katelyn Rollins, ECU, 2022).



GRAPH 1.2. Bones by unit (Katelyn Rollins, ECU, 2022).





GRAPH 1.3. Unit 1 artifact distribution with wood (Katelyn Rollins, ECU, 2022).

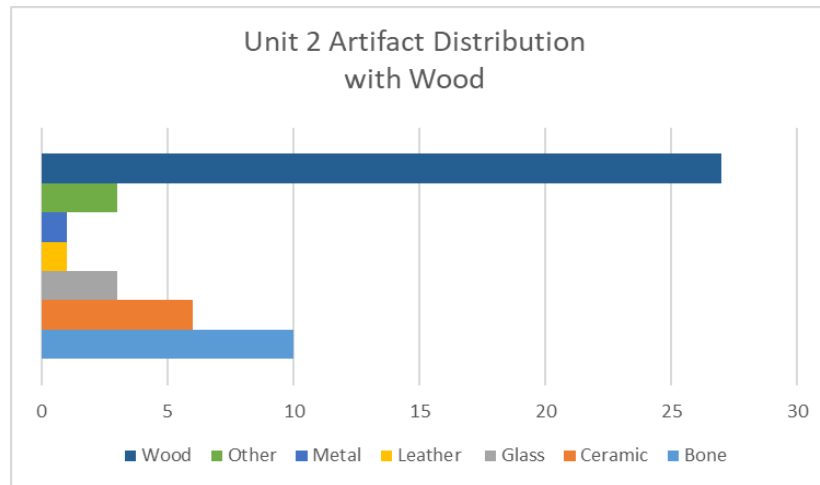
Metals present in the unit include iron strips or patches, iron fastenings, and lead sheathing.

Diagnostic items were ceramic sherds (3), a pipe bowl (1) and a bottle base and neck (2). A small mammal bone could represent the right femur of a rat. Rats have been a common inhabitant of ocean-going vessels throughout history. A full zoo-archaeological analysis might supply critical information relating to the origin of the vessel, or the ports visited. When analyzed alongside other faunal remains present on a wreck, evidence of rat bite marks can indicate food which may have been consumed by the unwanted rodents aboard a vessel rather than its intended sustenance for crew members (Queen Anne’s Revenge Project 2017).

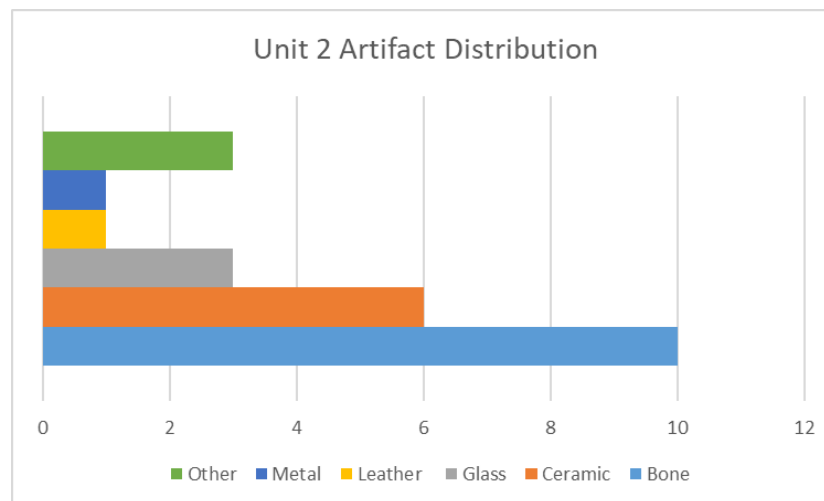
Both the white kaolin pipe bowl and the dark green bottle neck in Unit 1 date to the latter part of the 1700s and early 1800s. The pipe bowl shape and heel location suggest it a date range of 1760 to 1820. The down-tooled string rim of the bottle neck dates to 1780—1800 (Hume 2001:303, 70-71).

## UNIT 2 (MIDSHIPS)

Unit 2 contained a total of 51 recovered item. It comprised 27 non-diagnostic wood fragments, 6 ceramic sherds, 3 glass sherds, one piece of leather, 1 metal item, and 10 non-identifiable materials.



GRAPH 1.4. Unit 2 artifact distribution with wood (Katelyn Rollins, ECU, 2022).

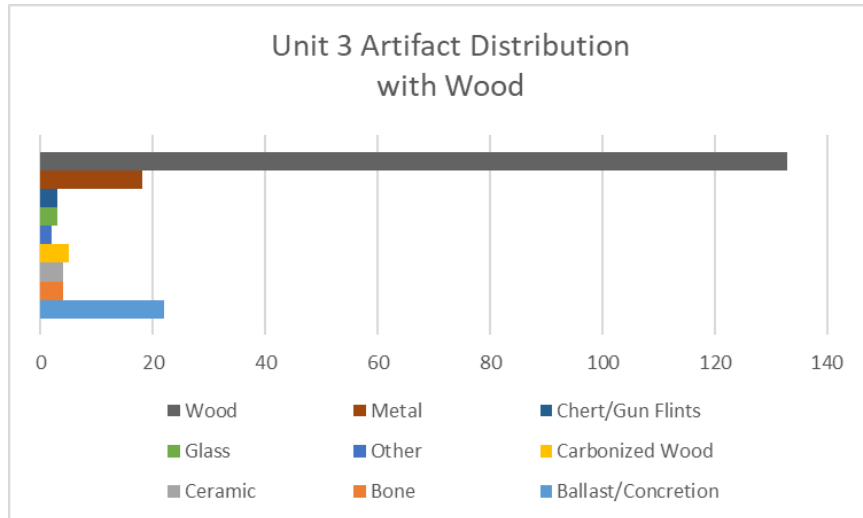


GRAPH 1.5. Unit 2 artifact distribution (Katelyn Rollins, ECU, 2022).

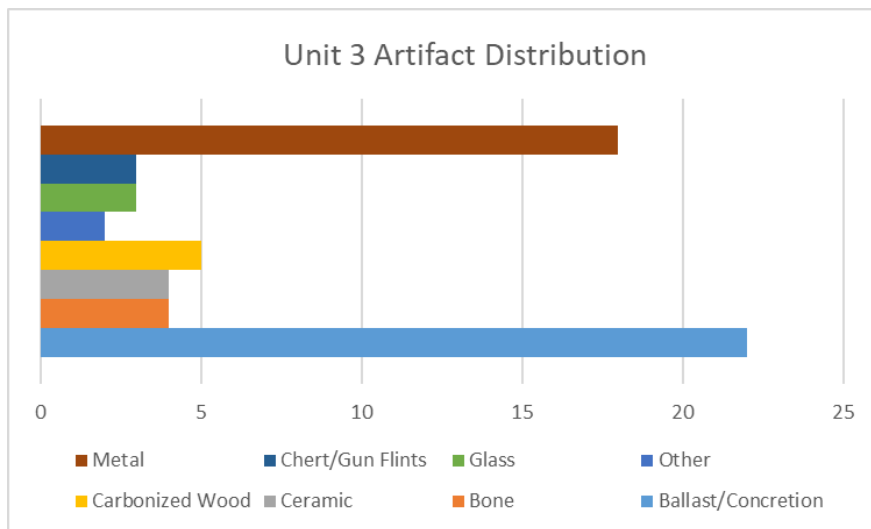
## UNIT 3 (STERN)

Unit 3 contained a total of 194 recovered item. It comprised 133 non-diagnostic wood fragments, 22 ballast stones, 18 metal fragments including a musketball, 5 carbonized wood fragments, 4

bone fragments, 4 ceramic sherds, 3 glass sherds, 3 gunflints, one piece of leather, and 2 non-identifiable materials.

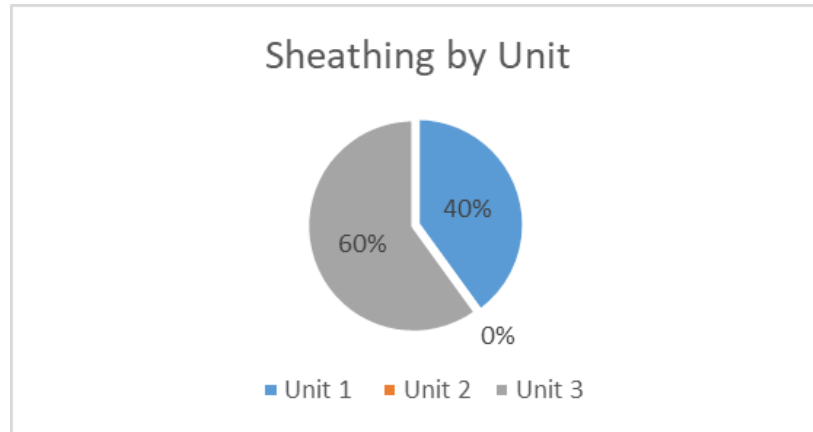


GRAPH 1.6. Unit 3 artifact distribution with wood (Katelyn Rollins, ECU, 2022).



GRAPH 1.7. Unit 3 artifact distribution (Katelyn Rollins, ECU, 2022).

Unit 3 contained 60% of the sheathing in the recovered assemblage, compared to 40 per cent in unit and nothing in unit 2.



GRAPH 1.8. Sheathing by unit (Katelyn Rollins, ECU, 2022).

## Section 2: The Naval Dockyard

### *Historical Background*

The area now known as English Harbour has been a haven in which ships can find protection from storms since 1660 (Nicholson 2002:3). Its first European-built structures appeared in 1725 and the area was decommissioned as a military base in 1895 (NPA 2014). Antigua has many fortifications along its coastlines set up to protect the island from outside invasions. The British had a constant naval presence in the area, but this required a place of upkeep to maintain the fleet. English Harbour was recognized as important for its sheltered, deep bays that were almost enclosed by hills (NPA 2014). The harbor was perfect for providing safe anchorage within an easily defendable geography (NPA 2014). Antigua was purely reliant on imports from neighboring islands, but this was constantly under peril from the wars fought in the Caribbean. To protect its cargo, having naval vessels near the trade routes helped support the local economy (Waters 2018).

Because of the protection it offered as well as its strategic value, English Harbour became a common place for careening and repair (NPA 2014). In 1725, the naval war in the Caribbean

required the British to establish bases where ships would be safe to be refitted or repaired (NPA 2014). English Harbour became quite valuable to the British as they waged war in the western world. Over the next two years, the Dockyard, then called St. Helena, was being built. Over the course of the next century the British Government added to the Dockyard whatever building it needed to run efficiently. In 1745, a capstan house, “Pitts” for careening blocks, storehouse, and watch house was added (NPA 2014). In 1895, the Antigua Dockyard was demilitarized due to the expanding use of steamships that it was not fit to repair (NPA 2014).

Today, the Dockyard is no longer a military base, but a tourist destination frequented by cruise ship passengers and the yachting community. Numerous travelers enter the Dockyard daily to learn about how giant ships once anchored in the surrounding bays waiting their turn to be refitted before returning to the ever-present war outside its protected waters.



FIGURE 2.1. Aerial View of Nelson's Dockyard looking west (Photo by Jeremy Borrelli, ECU, 2022).

## *Naval Dockyard Historic Structures*

English Harbour is home to numerous historic structures within the scope of Nelson's Dockyard National Park. The structures that were focused on in this project were the capstan house and two heave down blocks. These structures were vital to dockyard operations as they were used to pull or "heave" ships onto their port and starboard sides for careening. The team documented the capstan house and the western most heave down block with 4k video from an iPhone 12 Pro Max at 60 frames per second. The remaining heave down block on the Careening Wharf that remains was documented with still images from a Nikon D3400. These videos and photos of these structures were used to create a photogrammetric model in Agisoft Metashape version 1.8.4.

The flight path taken for the heave down blocks started with a perimeter route around the block, with the second pass following the same route but from a lower angle, and the third pass was from a higher angle looking down at the block. For the heave down block next to the stone quay, an extra pass was made to document the cannon that was on top of it. The video length for this heave down block was 4 minutes and 1 second. The flight path for documenting the capstan house had to be altered due to the walls, the three capstans in the interior, and the cannon on the eastern end. The video recording started at the western most entrance to the capstan house and captured the exterior perimeter of the area to lock everything in for the photogrammetry model. The second pass followed the first but focused on a top-down angle of the capstan house wall. Once completed, the inner perimeter of the capstan house wall was recorded, followed with doing individual perimeter passes of the capstans starting with the western most, center, and

eastern most. The final section of the flight path was dedicated to capturing the cannon at the eastern side of the area. The video of the capstan house was 18 minutes and 30 seconds.

The capstan house at the English Dockyards was constructed in 1807 while the heave down blocks construction date is unknown, but they preceded the 1820 construction of the stone quay. These structures were used for careening operations, where tackles were attached to vessel's masthead on one end while the other end was connected to the three capstans. The vessel was then laid onto one side, exposing the hull for it to be cleaned and repaired, if necessary. To control the angle of heel, and to right the vessel once the cleaning or repairs were complete, tackles were run underneath the keel secured to the heave down blocks. The process would be repeated once one side was completed (Dear & Kemp 2005:88).



FIGURE 2.2. View of the Capstan House looking northeast (Photos by Jeremy Borrelli, ECU, 2022.).

The construction of the English Dockyard capstan house was built in the post-and-beam style, something that was typical of the other structures in the dockyard. The interior was open so that the capstans could function without impediment. The loft of the house was reserved for quartering the seaman of the vessels being careened. In 1925, a hurricane destroyed the capstan house leaving the low brick foundation line. (NPA 2014)

The heave down blocks were constructed of locally quarried stone. Contained within were three admiralty longshank anchors. The central anchor was positioned with the ring protruding at the seaward end of the structure. This ring is where tackles would be attached to control the vessels being laid on their side. The other two anchors were positioned in the opposite direction. On the western most heave down block, a portion of an anchor's fluke can be seen through the top of the block. (NPA 2014).

### *Cannon*

As English Harbour became a major hub for Royal Navy activities from the mid to late 18th-century, many cannons were used throughout the area for several reasons. In total, 39 cannons were documented throughout the dockyard with purposes that included the mooring of vessels to the dockyard, defense, and decoration. While the majority of these guns were found within the primary docking area, two still reside at Fort Berkeley and another two can be found on Galleon Beach. These weapons can help to tell the story of how vessels were roped in place upon their arrival, the dockyard's capacity to defend itself, and even the typical armament possessed by vessels that made use of the harbour.





FIGURE 2.3. Cannon locations within English Harbour. Each gun is defined by the designation ‘CAN’ and followed by a number. (Photo by Nicholas Baker, ECU, 2022.)

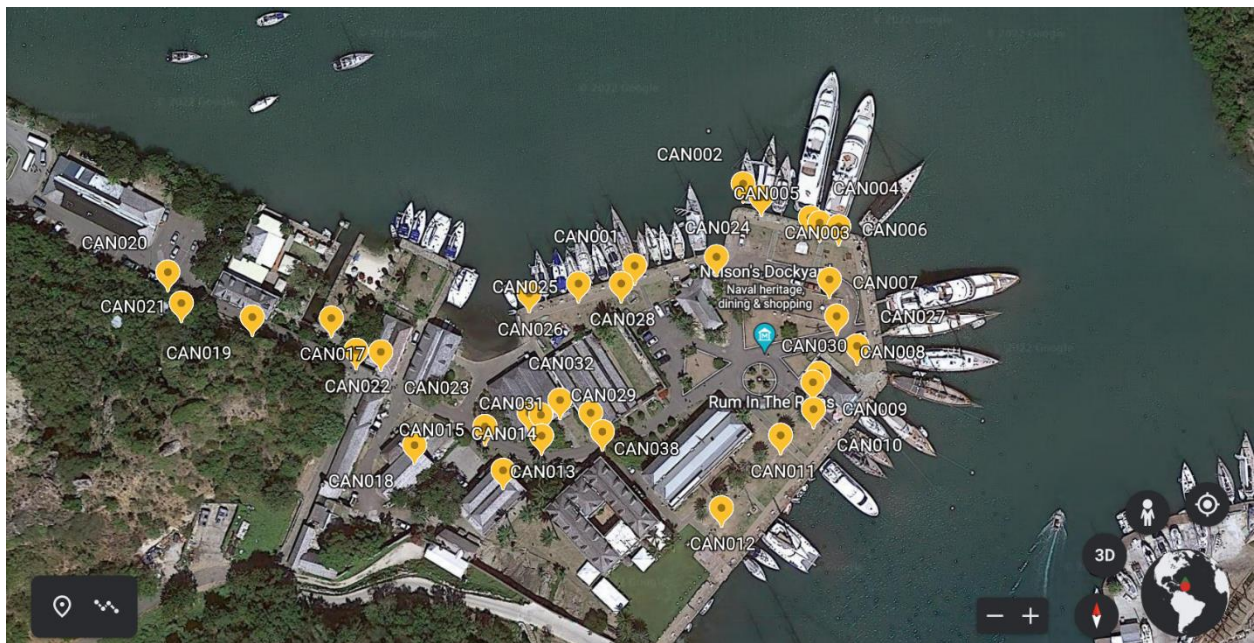


FIGURE 2.4. Cannon Location within the dockyard itself. Each gun is defined by the designation “CAN” and followed by a number. (Photo by Nicholas Baker, ECU, 2022.)

## Cannon Moorings

Of the 39 total cannons found within English Harbour, the majority of them were found driven into the ground just past their trunnions with muzzle facing upwards. Most of these cannons that have been driven into the ground are evenly distributed along the dockyard's 3 sided perimeter that is facing the water while the landlocked side has none. The purpose of these guns appear to be for mooring vessels into place. In total, CAN2-6 are moored into the northern facing perimeter, CAN9-12, CAN27, and CAN30 are located along the southern perimeter, and CAN, 24,25,26, and 28 are along the northeastern perimeter. Of all the cannons within the dockyard, these are likely the only guns that have remained insitu while all other guns have been moved through the years on the carriages they still remain on or have been placed on the ground in areas to be viewed by those who have come to see the harbour. The sizes of these guns appear to range from 4-18 pounders.



FIGURE 2.5. Image of several cannons that have been driven into the Northern perimeter of the dockyard to either side of the heave down block. (Photo by Nicholas Baker, ECU, 2022.)

Another driven cannon that appears to serve a functional capacity is CAN17, a singular gun found alongside the large pillars used for sail repair. Based on its proximity to this facility, CAN17 may have been used to moor vessels undergoing sail repair closer to these pillars to

make transporting sails between the vessel and the repair location easier. Using these cannons can help to determine how many vessels could be moored into the dockyard.



FIGURE 2.6. Photo of CAN17 driven into the ground next to pillars used for sail repair. (Photo by Nicholas Baker, ECU, 2022.)

The final driven cannon that appears to serve a specific function within the dockyard is CAN35, a large gun that has been driven into the rocks at the tip of the peninsula that boasts Fort Berkeley. The leading theories toward the purpose of this gun include its use as a mooring point in which to help slingshot vessels into the harbour or the point that allowed the Royal Navy to stretch a boom chain across the harbour entrance. Other iron spikes and buttons were found both in Fort Berkeley and just behind CAN35 that could have allowed soldiers within the Fort to operate some sort of chain or roping to complete either of the offered theories.



FIGURE 2.7. Images of CAN35, believed to either have been used to ferry vessels into the the harbour or to stretch a chain boom across the dockyard access for defense. (Photo by Nicholas Baker, ECU, 2022.)

But while these driven cannons appear to have an intended purpose based upon their locations within the dockyard, others appear to serve only as decorations. Examples of this can be seen in the case of the entry to the dockyard where 2 cannons have been placed at both the beginning and end of the short road that allows entrance into the docks. These cannons identified as CAN20, 21, 22, and 23 appear to be small 1-3 pounders that serve no other purpose than for the entrance to be more aesthetically pleasing. Upon entering the dockyard, another cannon can be found driven into the ground just in front of the sail house while 3 more (CAN 31, 32, and 33) line the southern side of the structure that sits just in front of the museum. These appear once again to only serve to make the building entrance more appealing.

Other driven cannons that seem to have been forgotten are cannons 29 and 38 that are nearly completely driven into the ground rather than only partially. While CAN38 sits on the Northern corner of the former copper and lumber storage building, CAN29 sits directly across from it on the other side of the street. A final cannon that is also buried to its muzzle is CAN28 that can be found just behind the heave down block on the northwestern edge of the dockyard. Possible answers as to why these cannons have found themselves driven almost completely into the ground could be due to interference they caused at another point in time and complete burial

solved this issue. In total 27 cannons are driven into the ground in the harbour. A common factor in the case of all these guns is the condition of their bores which have all been either capped with iron or filled with dirt. This no doubt pertains to the safety measures taken to ensure these guns could not be fired while in the ground as well as help to preserve the integrity of the gun and prevent standing water from accumulating inside the bore and rotting the gun out from the inside. These guns can help to tell us more about the number of vessels that docked in the area and how they used additional cannons that had fallen out of service for other means.

Of the 39 cannons that sit within the dockyard, 12 either remain in their carriages or now sit idle along the ground. Two of these cannons appear to be larger in nature than the ones driven within the ground and not all have had their bores filled or capped with any materials. The chances of these guns being in situ are low and have most likely been moved throughout the years to make room for other projects as well as make the dockyard more appealing to visitors. Other guns appear to have been severely damaged and were off-loaded by the vessel they came on for them to become a permanent feature of the dockyard.

### Carronades

Of these guns, 3 are carronades, a style of gun intended to be used at close range. While all three of these guns now rest in carronades, two match one another and may match the description of British carronades dating to 1780 (Nicholson 1994: 35-37). While one of these guns (CAN16) is found directly in front of the structure now used as a gift shop, the second carronade (CAN19) found at the entrance within a man-made half dome that has been carved out of the cliff alongside the roadway entrance. The final carronade (CAN14) is much larger than the previously two stated guns and rests on the southeast side of the Dockyard Museum. This gun is also of British origin based upon the seal of King George as well as the mark of British

Ordnance. This gun appears to match ones constructed in 1800 and could bring 32-pound cannon fire or larger at close range with devastating effects (Nicholson 1994: 35-37).



FIGURE 2.8. Dockyard carronades. *Top*, CAN14, the largest of the three carronades within the dockyard. *Bottom Left*, CAN16. *Bottom Right*, CAN19. CAN16 and CAN19 are the smaller of these gun types and appear to match one another. (Photos by Nicholas Baker, ECU, 2022.)

### Mounted Guns

Other guns still remaining within their carriages include two guns that sit in front of the dockyard museum, two on Galleon Beach, and one within Fort Berkeley. Of the two guns in front of the museum, one is French (CAN13) and one is English (CAN15), both appear to be 18-24-pounders. This is determined based on the French markings on one gun that associate it with the French Revolution as well as the Seal of King George and the mark of British Ordnance on

the other. While the French gun was mounted in front of this building after its capture to be used as propaganda against the French, the English appears to also be used for decoration. The French gun and English gun have had their touch holes filled while only the French gun has had its bore capped with iron.

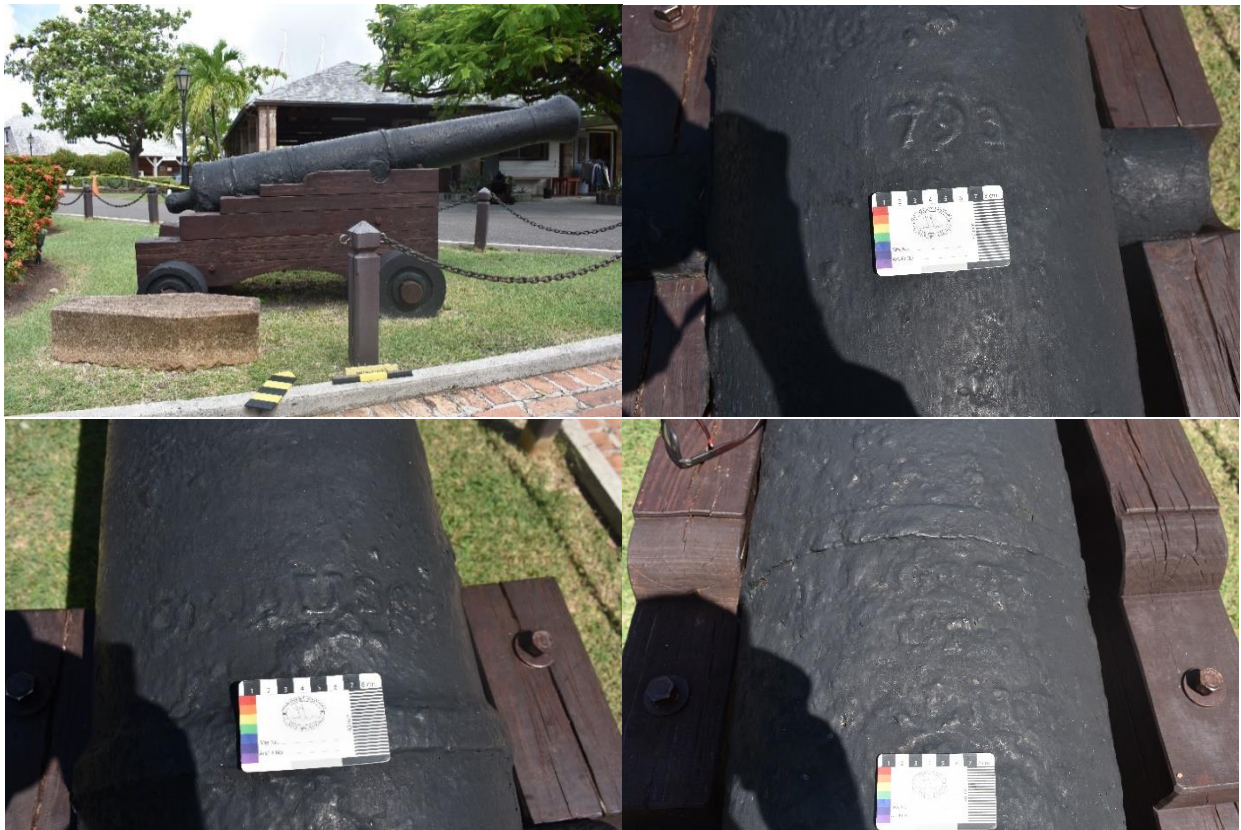


FIGURE 2.9. CAN13. *Top Left*, a profile photo of French gun CAN13 displayed outside of the museum. *Top Right*, 1793, the date CAN13 was constructed. *Bottom Left & Bottom Right* reveal propaganda carved into the cannon. (Photos by Nicholas Baker, ECU, 2022.)

The rest of the guns still remaining in carriages are found outside of the harbour with one remaining gun located on Fort Berkeley that has yet to be discussed and two on Galleon Beach. Of these 3 guns, the one found on Fort Berkeley (CAN34) can be found within the small redoubt that was the original defense that comprised Fort Berkeley and appears to be an 18-24 pounder English gun. This assertion is based on the seal of King George as well as the mark of British

Ordnance on the top of the gun. Other marking also feature on the carriage of the gun that does not appear to match the gun it currently houses. These markings include what appear to be sizes and weights of what the carriage is rated for.



FIGURE 2.10. CAN34. (Photo by Nicholas Baker, ECU, 2022.)



FIGURE 2.11. CAN34. (Photo by Nicholas Baker, ECU, 2022.)





FIGURE 2.12. CAN34. (Photo by Nicholas Baker, ECU, 2022.)

The final two guns that can still be seen on carriages is an English gun (CAN36) and a Swedish gun (CAN37). These guns do not feature in their original carriages and were placed in white mounts that have been anchored in the sand. These guns appear to be 4-8pounders that are intended to only serve as beach decorations with no records of their original position in the dockyard.

#### Other Cannon

The remaining 4 guns within the Harbour can all be found on their sides and laying in a position clearly intended for the viewing pleasure of passing tourists. All these guns feature in the dockyard and have not been filled or capped with any material inside their respective bores. Within this cannon grouping, both largest guns in the dock feature in this set (CAN1 and CAN7) and are tentatively identified as English 32-pounders. While CAN1 can be found lying atop the dockyard's northeastern heave-down block, CAN7 sits within the remains of the capstan house. Noteworthy features of these guns include a cracked muzzle as well as cascabel on CAN7 which

could suggest why this gun was left in the dockyard as well as an “A” on the trunnion of CAN1 that has been identified as a maker’s mark.



FIGURE 2.13. CAN1. (Photo by Nicholas Baker, ECU, 2022.)



FIGURE 2.14. CAN7. (Photo by Nicholas Baker, ECU, 2022.)

Right across the road from CAN7 is another gun laying on wooden blocks that has had severe corrosion and damage to the muzzle (CAN8). This gun is much smaller than the previously mentioned naval guns and is most likely a 3-4pounder. While the surface is rusted, the most prominent feature of CAN8 is its exploded muzzle that may have occurred while firing the gun. After this incident, the gun was most likely dropped off by the ship it came with where it has been left to this day.



FIGURE 2.15. CAN8. (Photo by Nicholas Baker, ECU, 2022.)

The final gun within this category is a small gun that is likely a 1/2-2pounder (CAN18). CAN18 has been deposited on the steps behind the sail repair shop and remains totally covered in concretion. The condition of the gun is poor and no record exists as to where this gun may have originated. As opposed to the other guns within the harbour that were most likely placed there by naval vessels and moved throughout the yard over the years, the high degree of concretion may indicate that CAN18 spent a significant amount of time beneath the water before being pulled to the surface.



FIGURE 2.16. CAN18. (Photo by Nicholas Baker, ECU, 2022.)

The collection of these guns present in English Harbour as one of high activity and importance during its peak in the 18th Century. The state that each gun was found in can tell us more about their function or state when they reached the dockyard. While the guns found driven into the ground can tell us about how many vessels could dock in the harbour at any one point as well as how they were moored in place, guns in carriages can help to show how these guns may have been used to defend the harbour or simply be used as decoration along with guns driven into the ground that are nowhere near water. This is combination with guns that continue to lay along the ground that could have been decommissioned due to use, age, or damage and abandoned at the dockyard to become permanent features to this day.

### *Stone Quay*

The original wharf in Nelson's Dockyard was made of tar-coated wood pilings wrapped in copper sheeting and iron tipped points. The wooden pilings were driven deep into the seabed and remained the dockyards mooring method until 1821. Boatswain Francis Fox and a crew of 34

enslaved Africans (23 laborers and 11 stonemasons) began the construction of a new stone wharf in 1821. The purpose of the new wharf was to expand dock space along with the working platform. South of the Dockyard, stones were collected from the natural rock surfaces of Antigua and then heated and pressed into large blocks. The stones were then transported to the waterside and placed over the original wharf. In 2003, much of the stone wharf in the Dockyard was renovated due to the increased risk of erosion. The original stones quarried in 1821 were removed and mounted on a new foundation of pre-cast interlocking blocks. A concrete slab was poured over the blocks which replaced the old wharf stones but left it appearing aged. On October 16<sup>th</sup>, 2022, the East Carolina University team began documenting and collecting measurements of the stone wharf directly facing Nelsons Dockyard and the second heave down block. It became evident that sea level rise and erosion is a pressing matter in the Dockyard. At high tide the water rises well above the stone quay and onto the walkway typically around 1600 each day. When the team's divers entered the water, the first glance led to the abundance of marine life, algae and seagrass clinging to the stone wharf. Mussels aligned consistently 40 to 60 cm below and throughout the baseline at the low tide waterline. Environmentalist visiting the site, confirmed that the mussels inhabiting the stone quay are an invasive species that may be cousin to the zebra mussel (Rollins 2022:7). The dive teams quickly noted that the overgrowth of algae and marine life below the waterline obscured the block stone features, making it difficult to accurately identify where one block ends and another begins (Rollins 2022:7). The stones are mostly heterogeneous in shape (Dunshee 2022:5-10), with the majority measuring 16x40cm (Livingston 2022:10). To obtain these measurements, the dive teams relied heavily on touch with respect to marine life. The wharf is built on three separate levels with the bottom level sloping outward and protruding toward Tank Bay. The protrusion is not uniform in every section of the stone quay. For example, on the baseline, the sections noted as 30

m to 40 m have a noticeably large, damaged area. This damage resulted in a large portion of the bottom level to be missing. Aside from portions and corners of stone blocking being nicked from years of docked yachts, many square impressions were found along the stone wharf that potentially housed metal O-rings for vessel dockage (Willis 2022: 2-7).

### Stone Quay Methodology

The Stone Quay was once a heavily trafficked area for the dockyard and still is in frequent use to this day. Recording the surface of the sea wall would allow for a more comprehensive understanding of dockyard maritime practices from the 18th century until contemporary times in Antigua. A 70-meter baseline was established on top of the Stone Quay in which teams of two would record the vertical surface area of the sea wall. Each pair was assigned a ten-meter section of the Stone Quay in which they completed scaled profile and cross-section drawings. The teams began with profile drawings of the sea wall and prior to each dive, proformas were made with the inclusion of established baseline and offset measurements to the top edge of the sea wall. Once entering the water, the dive teams would map in their designated sections, in reference to the established points from the baseline, of what was discernible from the harbour wall. The ten-meter section per team was further divided into five-meter units where teams created both the profile and cross section drawings and for each unit, team members would rotate through taking measurements and drawing the profile. Divers had to be quite cognizant through this process due to the sea life covering the harbour wall, while being cautious of the wildlife, the teams often had to carefully feel along the stone in order to distinguish the edges of the blocks. The cross-section drawings would be particularly relevant for highlighting areas of change and damage to the sea wall. However, teams of four were needed in order to obtain accurate measurements from the edge of the wall at every five meters along the baseline. A

measuring tape was attached to the length of a hollow PVC pipe, at just past four meters in length, and a level was secured at the top of the PVC pipe with tape. Of the team of four, one individual would remain at the surface and keep the PVC pipe level to the harbour edge while another would remain at the bottom to keep the PVC pipe from shifting. Between the remaining divers, one would use a ruler to measure the distance of the wall to the attached vertical measuring tape while the other diver recorded the measurements on a baseline and offset table. Following the end of the dives, the teams plotted their points to create the cross-sections of the Stone Quay. Once drawings were completed after three days of diving along the area, the team individually created drawings in illustrator for both the profiles and cross-sections for the aim to merge them into complete profile and cross-section views of the harbour wall.

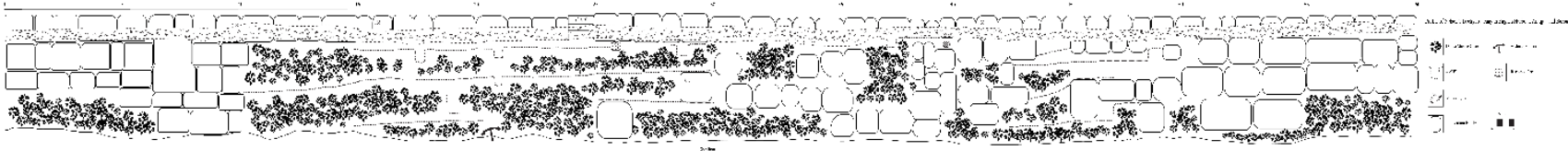


FIGURE 2.17. Quay profile. (Created by ECU field school participants. Digitized by Dayan Weller, ECU, 2022.)



FIGURE 2.18. Students mapping the Quay (Photos by Lynn Harris, ECU, 2022.)



## Section 3: Fortifications

### *Historical background*

#### Fort Berkeley

Fort Berkeley was the bulwark of the defensive fortifications protecting English Harbour, Antigua. The small protruding peninsula acted as a gate for protecting the harbor permitting entrance and exit of vessels from the west side of English Harbour. The defenses at Fort Berkeley go back 21 years before the Royal Navy's presence in English Harbour. Initial fortifications on the peninsula were originally constructed in 1704 (Waters 2018:158). This original construction consisted of a small square redoubt built near the tip of the jutting peninsula. Construction for the redoubt was funded through the Antiguan colonial government and constructed by the local enslaved population (Waters 2018:155). The stone and concrete appear to have been sourced locally from a limestone quarry located off the harbor at the base of the peninsula on which Fort Berkeley is located. The limestone bricks that make up the redoubt are not uniformly designed, which demarcates the early construction prior to the involvement of British engineers (Waters 2018:155).

The guardhouse of Fort Berkeley is the first addition to the fortification since the square redoubt's construction in 1704. The guardhouse acted as a sentry post for Fort Berkeley and was constructed in 1726 (Waters 2018:155). It originally was the storehouse for gunpowder at Fort Berkeley before the construction of the bombproof magazine in 1811 (Waters 2018:156). It was also a source of wind protection for the soldiers stationed there during colder nights as well as an additional fortification with windows constructed with a clear view to the east of English Harbour to Fort Charlotte, one window directed towards the mouth of the harbor, as well as a window directed to the outward Atlantic Ocean.

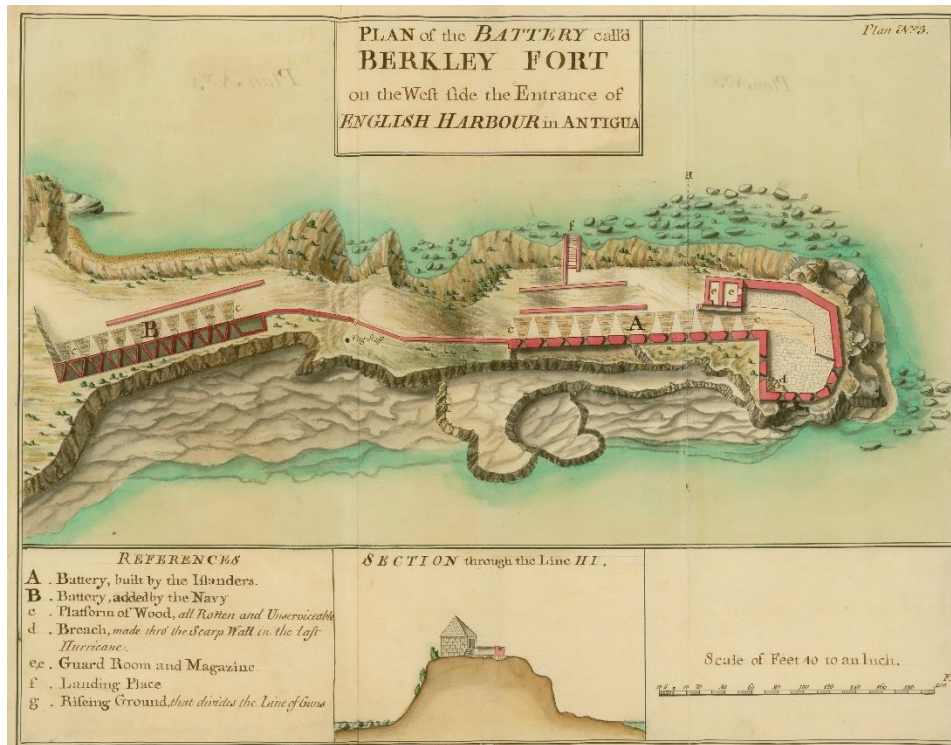


FIGURE 3.1. Plan of Fort Berkeley (Image courtesy of John Carter Brown Library).

The most comprehensive construction of Fort Berkeley occurred in the 1740s under the command of Commodore Charles Knowles. During this construction period, Commodore Knowles was in command of the Leeward Islands Squadron at Nelson’s Dockyard and notably constructed a linear defensive wall with embrasures for cannons at Fort Berkeley (Waters 2018:157-58). This construction was completed via the professional engineering of the Royal Navy, as seen through the uniformity and alignment of its construction. The same quarry was used for its construction that was used for the original square redoubt fortification (Waters 2018:158). The construction of the wall was at the initiative of Commodore Knowles, and the Royal Navy covered the construction cost rather than the Antigua colonial government (Waters 2018:159). This was one factor in the temporary removal of Commodore Knowles from command by the Royal Navy as they saw the expenses as unjustified (Waters 2018:159).

The bombproof magazine acted as a replacement for the role the guardhouse had in storing gunpowder. It was constructed in 1811 during the peak of hostilities of the Napoleonic Wars. The significant traffic of British Royal Navy ships into the English Harbour likely caused this construction during this time (Waters 2018:155). The bombproof magazine also contained space for a cooperage and sifting room for packing explosives. The structure was built to hold approximately 300 barrels of gunpowder (Etherington 2002:199).

The armament of Fort Berkeley was 29 cannons at the peak of its use (Waters 2018:155). Originally the fortification was occupied by locally trained Antiguan gunners. It was only in 1783 that Fort Berkeley was occupied and staffed by British soldiers. Some historians believe there was a massive chain attached to an upturned cannon bollard on site attached to the other side of English Harbour to Fort Charlotte (Oliver 1894:5). An additional strength of Fort Berkeley was the wind itself; wind severely limited the entrance of sailing vessels into English Harbour. Ships were forced to sail directly at the fortifications of Fort Berkeley, where they would then drop their sails and drop hard, pulling into the harbor and drifting in (Waters 2018:92-93). The vessel would then have to be pulled into English Harbour by ropes from Fort Berkeley.

Fort Berkeley was never actively used in any conflict scenario. The preventative nature of its construction was enough to cause enemy vessels to stay away and never attempt a direct invasion or attack on English Harbour. The primary role of the fort was to protect English Harbour, where vessels would go for shelter from hurricanes, repair work, or scrapping. By 1707, British vessels first used English Harbour as a shelter, and by 1723 the Harbor was in full operation (Waters 2018:12-13). Fort Berkeley was officially handed over to the Royal Crown in 1783 immediately following the American Revolution (Waters 2018:159). This was potentially

due to mistrust between the local Antiguan colonial government and the government of the Royal Crown because of the Navigation Acts, which blocked Antiguan trade with the newly established American nation. Following the end of the Napoleonic Wars in 1815, Fort Berkeley and most Antiguan fortifications were left in disrepair, and then in 1850, all operations at Fort Berkeley ceased.

The last restoration work for Fort Berkeley occurred in 1989 and focused on the guardhouse. The guardhouse roof is made of wood, and therefore has experienced deterioration from wind and rain. Portions of the roof are missing, and in need of repair. The bombproof magazine is largely intact, with some historic and modern graffiti carved on the inside walls. The inside ceiling of the magazine shows signs of water intrusion due to the discoloration of the mortar on the top sections. There is one remaining cannon, forged in 1805 and stamped with a King George III seal (Oliver 1894:5). The most significant erosion at the fort is located at the edge of the crenelated wall built by Royal Navy. On the windward side of the fortification, wave action has caused a 5.5m section of the wall to collapse into the ocean. Almost 3m of the stone walkway has also eroded either when the wall broke apart or after that event (Figure 3.2). The cliff immediately below the broken section is significantly eroded so more damage is likely to occur with increasing storm activity in the Caribbean.



FIGURE 3.2. Aerial view of the eroded wall of Fort Berkeley and underlying cliffside (Photo by DJ Schaefer, ECU, 2022).

### West India Regiment Complex

The West India Regiments of the British military were composed mostly of enslaved-Africans, though the legal status of the soldiers in the West India Regiments was ambiguous for most of the regiment's history. Originally assembled to support the failing British efforts against French colonial incursions in the Caribbean, two regiments of recently arrived slaves were raised in 1795, with six more being put together five months later, and ultimately an additional four added by the end of 1798 (Buckley 1978:83). These twelve regiments were born out of necessity, as the crown was unable to recruit enough white soldiers for service in the West Indies, and too few free volunteers existed to form adequate defense forces for the Caribbean colonies (Lampert 2011:633-635).

While predominantly composed of recently arrived slaves, the West India Regiments were not exclusively made up of forced laborers; their ranks included freemen from the colonies along with white Englishmen, adding to the complexity of what space the West India Regiments occupied regarding the compulsory nature of the service (Buckley 1978:92). In 1807, the Prime Minister Lord Grenville declared that all enslaved members of the armed forces were officially considered free men, clarifying that this had always been the position of the government regarding the West India Regiments. Despite the seemingly abolitionist position of the Prime Minister when it came to those purchased for military service, in practice the newly clarified legal status and full pay did not see African soldiers able to enjoy their technical freedom- all enlistment in the West India Regiments (coerced or otherwise) was considered a lifetime employment, without the ability to exit the contract (Wells 2021:48; National Parks 2014:88).

Over 13,000 enslaved Africans were purchased for British Military service during the West India Regiments existence, very few of which were former plantation workers in the Carribean. Since those with ties to local communities were seen to have a higher likelihood of rebellion, the ideal West India serviceman was not acculturated to Carribean living in the eyes of the British (Chartrand 2011). Even with extreme reservations on the part of the British legislature when it came to employing a majority enslaved military force in the West Indies, the West India Regiments proved successful in combat, participating in campaigns during the Napoleonic Wars from 1805-1815, including the invasion of Guadeloupe (Wells 2021:45). Even with the battlefield successes of the West India Regiments, the British were not able to completely avoid complications from their decisions to use enslaved soldiers. Multiple mutinies broke out in the ranks of the 2<sup>nd</sup> and 8<sup>th</sup> West India Regiments during the first years of the Napoleonic Wars, though none were entirely successful and were put down after a few days in each case. In the

immediate aftermath of the Napoleonic Wars, the West India Regiments were not involved in many significant conflicts, though they were occasionally employed in the stopping of slave rebellions in the British colonies (Wells 2021:52). Antigua was not subject to any combat during the years of colonial warfare between France and the British Empire, and the defenses of the island maintained by the West India Regiments went unused until they were disbanded.



FIGURE 3.3. LiDAR scan of the West India Regiment Officer's Quarters foundation (Image by Dayan Weller, ECU, 2022).

On Antigua, the 4<sup>th</sup> battalion of the West India Regiment was stationed at a complex known as the “Middle Ground Barracks”, above Fort Berkeley at English Harbour. Immediately below the complex is a battery alternately called “Keane’s Battery” or “One-Gun Battery.” While no structures remain fully standing at the West India Regiment complex, the foundations of the complex remain intact, along with a few remnants of wall sections, and a considerable amount of material culture on the surface of complex (Figure 3.3). Most of the associated material culture consists of ceramic scatter (some with diagnostic features), along with lower concentrations of historical bottle glass. Additionally, a musket ball was recorded approximately twenty meters west of the boundaries of the complex, near the edge of the Middle Ground Trail. Using historical maps, the foundations of multiple structures were able to be identified. The largest structure at the West India Regiment complex was the officer's quarters, which also

appears to have the highest concentration of surface artifacts (though this may be complicated by the presence of overgrown vegetation on other parts of the site). The most intact structures are the cisterns, located north of the officer's quarters and Keane's Battery (Figure 3.4).

Additionally, the foundations of enlisted barracks and officer's kitchen are present on the site, along with heavily degraded remnants of canals running over the hillside towards the cisterns.



FIGURE 3.4. Perspective view looking northeast of the West India Regiment cistern (Photo by Madison Elsner, ECU, 2022).

### Fort Charlotte and Horseshoe Battery

The Antiguan government constructed a fortified line for musketeers during the early part of the 1700s. It was built approximately 100 meters to the west of English Harbour Fort, now known as Fort Berkeley. In 1745, a map of the fortification depicted the addition of 11 guns (Nicholson 1994:19). Kane Horneck, an officer in the Royal Engineers, reported in 1752 that shows this fortification was referred to as 'Eleven Gun Battery' and in 1755 it was referred to as 'Horseshoe Battery' (Figure 3.5). The number of guns at the battery changed over the next two



decades with 8 guns being reported in 1765 and 12 guns on a 1773 map that included officer's barracks on the cliff above (Nicholson 1994:19).

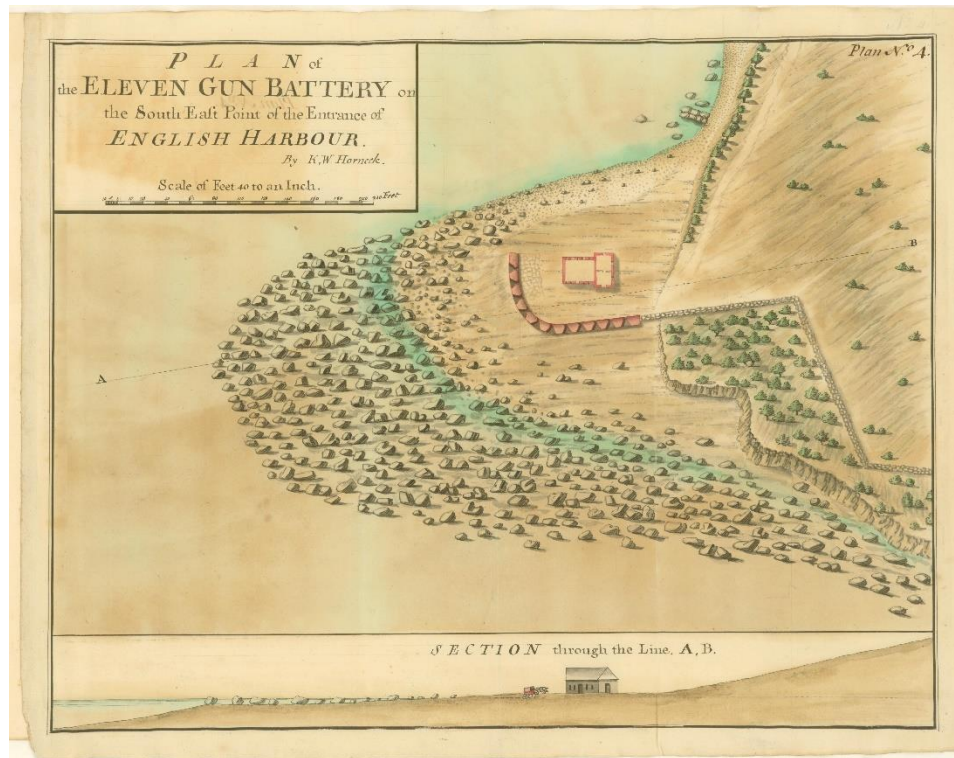


FIGURE 3.5. Map by Kane Horneck showing the Eleven-Gun (Horseshoe) Battery in 1752 (Image courtesy of the John Carter Brown Library).

In 1780, there was movement in Antigua to reinforce the fortifications of the island. During this period in 1790 another battery was constructed above Horseshoe Battery, located over the 'Pillars of Hercules.' This fort would later be named Fort Charlotte, after Queen Charlotte the King George III's consort. Fort Charlotte was constructed in the shape of a horseshoe, similar to the battery below it, with large sandstone bricks (Nicholson 1994:19). The overall thickness of the battery's rampart was 336cm with an interior and exterior wall built with these sandstone bricks (Waters 2018:162). The interior wall's bricks were approximately 15-20cm in length, 30cm in height, and 20-30cm thick. The exterior wall had larger bricks that measured approximately 55-70cm in length, 40-50cm in height. The gap between the two walls

were filled with a mixture of rubble, mortar, and dirt. This technique created a thicker layer or protection for stationed cannon and gun crews stationed here (Waters 2018:162).

Both Fort Charlotte and Horseshoe Battery served as part of the defense for English Harbour and to help prevent any rear attack on Falmouth Harbor. According to map in 1745, there is an anchor in the reef northwest of Horseshoe Battery. Here a chain was attached and drawn across the entrance of the harbor to a fastening point at Fort Berkeley. This chain would have had spars attached to it to deter enemy ships from entering the harbor. Fort Charlotte was further developed in the following years as a signal station. In 1823, a map of Fort Charlotte shows two guardhouses that were built at the lower end of the battery (Nicholson 1994:18-19).

Today, Horseshoe Batter has collapsed along the cliff side, likely due to erosion. Fort Charlotte is still accessible via a trail that begins at Galleon beach. The battery is still intact, though there is significant erosion along the exterior wall, namely at the base of it with recess points measuring from 10 to 45 centimeters deep. Along the southern edge of the exterior wall there is vegetation that has grown up to the wall, possible helping maintain soil integrity.

### Lookout Point and Blockhouse

Within a short distance of Nelson's Dockyard is a former military complex, Shirley Heights, that consists of Lookout Point and Blockhouse. In 1781 the new Captain-General of the Leeward Islands, Thomas Shirley, came to Antigua with a plan to fortify the eastern heights above the Naval Dockyard (Weaver 2002:5). Named after Thomas Shirley, the complex was erected to defend the Dockyard, serve as a military depot, and to provide the necessary facilities for troops (Weaver 2002:5). At this time, however, Britain had control over Jamaica, Barbados, and Antigua with fear of a French attack, causing the formation and expansion of Shirley Heights

by building about fifty structures (Weaver 2002:6). From the 1780s to 1854, Shirley Heights and the Blockhouse were continuously occupied by the British regiment until the last of the troops were reassigned to another Caribbean colony, Trinidad (Weaver 2002:7). The dominant structures were Fort Shirley, the Royal Artillery Quarters, the powder magazine, officer's quarters, and the barracks. During the fall 2022 field school, the Program of Maritime Studies particularly looked at the remaining ruins of the Lookout Point and the Blockhouse.

At 490 ft, the Lookout Point offers a panoramic view of the Naval Dockyard. It consists of the Royal Artillery Guard House, which was once responsible for the Signal Station, where a flag was hoisted for warnings and alerts (Waters 2018:76) and the Royal Officer's Barracks. Today, the Guard House serves as a restaurant and bar while the Royal Officer's Barracks is eroding. To the east of Shirley Heights and considered the easternmost part of the complex is the Blockhouse. The Blockhouse has several buildings, being that of the Officer's Quarters, a cistern, men's barracks, offices, powder magazine, and married stables (National Parks Authority of Antigua and Barbuda 2014:63, 65). Today, most of the buildings are dilapidated due to age and environmental stressors, however, some, such as the powder magazine, remain in good condition.



FIGURE 3.6. Perspective looking west of the powder magazine at the Blockhouse ruins (Photo by Olivia Livingston, ECU, 2022).

### *Methodology*

#### Photography

The Historic American Buildings Survey (HABS) and Historic American Engineering Record (HAER) have a development of standards regarding documenting and recording historic architecture (Historic American Buildings Survey, 2020). By implementing the HABS and HAER recommendations throughout the terrestrial fieldwork in Antigua, the team captured structures of interest for future site assessments and the historical record. Throughout the photography process, GPS points were taken through the World Geodetic System (WGS84) for reference points, as well as implementation of scales and measurements within the photos. Using the Nikon DSLR for documentation, the team followed HAER guidelines for the various view types of each structure, gathering a general or environmental views, front façade, perspective

view of front and rear, as well as exterior and interior details (Heritage Documentation Programs 2015:3). Through these numerous perspectives, the structure and surrounding environment can be assessed.

### Drone Operation at Fort Berkeley

One of the objectives for this project was to complete a full 3-dimensional recording of Fort Berkeley to assist in on-going site management. Due to the large area to be surveyed, the team opted to use a DJI Mavic Pro Platinum UAV to collect video data, which would be input into photogrammetric software to render a 3D image. This drone was connected to a controller attached to one team member's phone, an iPhone 11. The controller locks onto the phone and connects through a downloadable application, so the operator can connect through Bluetooth to the drone. This connects the drone's camera to the iPhone, so that the screen portrays what the camera sees. The operator stands at a position above the landscape, if possible, or at a position to best see the drone while flying it. As a team, we separated at certain points of the landscape so that one person at each time had eyes on the drone. Multiple individuals acted as spotters so that there was someone who could see the flight path and direct the operator, so the drone did not crash or get too close to the ground and ocean.

When the team worked on Fort Berkeley, the drone operator stood on a peak above the fort, which provided an optimal viewpoint to see the entire landscape. Each student was positioned at locations along the fort to keep the drone in view, like at the edge of the fort where the operator would not be able to see the drone in a low pass. The drone did three revolutions around the fort to capture the foundation as well as the roofs and tops of any structures. Lastly, the drone did two final passes over the top of the fort to record any remaining places not

previously captured. The drone was used to capture footage of Fort Berkeley and the erosion around the foundation. This method was attempted at the West India Regiment ruins, but the drone was attacked by a hawk and destroyed.

### Photogrammetry Processing of Drone Footage

To process the drone video footage, the video files were first imported into Agisoft Metashape Professional Version 1.8.4. and photos were extracted at 30 frames per second. Once extracted, under 'Workflow,' 'Align photos' was selected and the following preselects were chosen; accuracy set to 'High,' 'Generic Preselection' is checked, key point limit is set to 40k, and tie point limit set to 4k. The remaining boxes were left unchecked and 'Ok' was selected to align the photos. Once the alignment was completed, any camera that showed 'NA' was manually realigned. The point cloud was then adjusted to fit properly on the grid, using keyboard shortcuts '1', '3', and '7' to get straight alignment from profile, plan, and front views of the model.

The next step in the process was to remove any distortion from the point cloud. To do this, less accurate tie points were deleted using 'Gradual Selection' under the 'Model' tab. There are four options to select from, but only three were used for processing this data: 'Reprojection Error,' 'Reconstruction Uncertainty,' and 'Projection Accuracy.' Each option was selected from top to bottom, each being selected twice. Once selected, the bar was manually moved to select approximately 10% of the tie points. From here they were deleted and under 'Tools' 'Optimize Cameras' was selected. All 10 cameras were selected, and the cameras were optimized. This process was repeated for each selection twice, doing the same selection back-to-back.

Once the tie point distortion was removed, 'Create Mesh' was selected under 'Workflow.' Under 'General' the following selections were made: For 'Source Data' 'Depth Map' was chosen, for 'Surface Type' 'Arbitrary (3D)' was chosen, for 'Quality' 'High' was chosen, and for 'Face Count' 'High' was chosen. Under 'Advanced' the following selections were made: under 'Interpolation' 'Enabled' was selected, for 'Depth Filtering' 'Mild' was selected, and 'Calculate Vortex Color' was selected. Once completed, 'OK' was selected and the 'Mesh' was created.

The following step was to create the model's texture. Before this could be done, any unnecessary areas of the mesh were removed. Once the texture process is initiated, the software will attempt to add texture to 100% of everything in the model, including poorly rendered areas particularly around the edges. This would have taken more time to run, and the object being modeled would have been less detailed. Like before, under 'Workflow,' 'Create Texture' was selected. Under 'General' the following selections were made: for 'Texture Type' 'Diffuse Map' was selected, for 'Source Data' 'Image' was selected, for 'Mapping Mode' 'Generic' was selected, for 'Blending Mode' 'Mosaic' was selected, for 'Texture Size Count' '16384 x 1' was selected. Under the 'Advanced' section only the 'Enable Hole Filling' was checked. Once the texture process was completed, the model had been rendered and was complete.

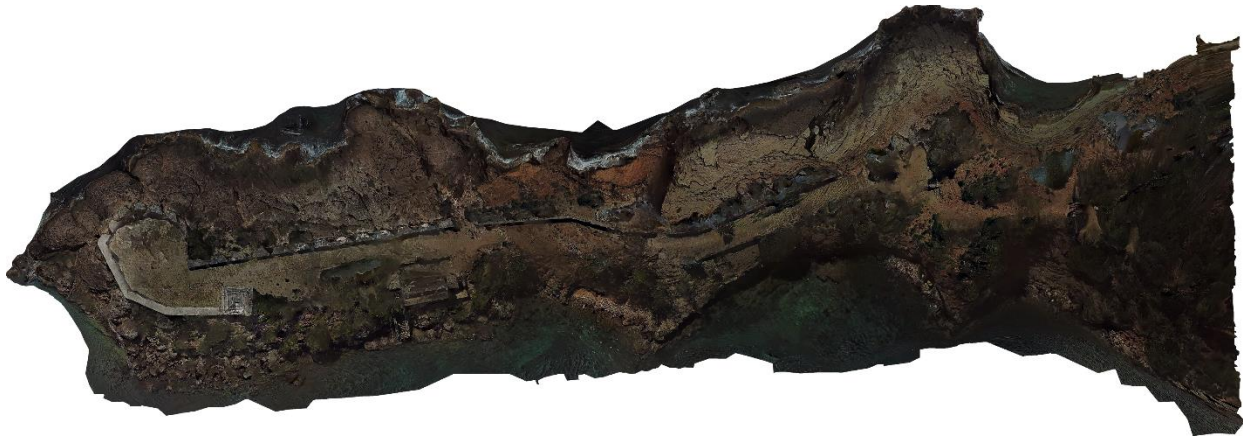


FIGURE 3.7. Orthomosaic of Fort Berkeley from the photogrammetric data (Image by Jeremy Borrelli and Raymond Phipps, ECU, 2022).

#### Lidar Scan: Three-Dimensional Documentation with the Scaniverse Application

To more thoroughly document the fortifications surrounding English Harbour, phone and tablet-based lidar scanning technologies were also implemented. This method was chosen due to its portability to the remote locations in which many of the fortified structures are found and because there were no high-accuracy three-dimensional laser scanning or Structure from Motion (SfM) devices available for use during the project. Applications using the cameras and lidar features of hand-held cellular devices for three-dimensional documentation have overall become more common in cultural heritage projects for these reasons (Basílio et al. 2022; Łabędź et al. 2022; Teppati Losè et al. 2022), because of their ability to be stored long-term in librarial institutions (Mune 2022), and due to their general low-cost, often being free (Basílio et al. 2022; Dickinson et al. 2022; Niantic, Inc. 2022). While specifications concerning the accuracy and precision of the point cloud and three-dimensional mesh files generated by such programs are often not reported by the developers (Niantic, Inc. 2022; Teppati Losè et al. 2022), independent academic studies have shown their results to have an accuracy to approximately 1-3cm if fully functional and being used properly, though this accuracy can sometimes be lower (Costantino et



al. 2022; [Rodriguez et al. 2022](#)). This is significantly less exact than other three-dimensional documentation methods ([Dickinson et al. 2022](#); [Teppati Losè et al. 2022](#)) and the resulting products are generally reported to be less dense in informational geometry compared to more sophisticated tools, some with as many as 50% of their recorded points unaligned ([Łabędź et al. 2022](#); [Teppati Losè et al. 2022](#)). However, the intent of this documentation was not to collect archival-quality three-dimensional models but instead to be the first of its kind for these cultural resources and most importantly, to help assess current on-site deterioration and erosion to be compared with data collected in the future.

The Scaniverse application ([Niantic, Inc. 2022](#)) was chosen for its free-cost and ease of use. While Scaniverse can operate using lidar if used in concert with lidar-equipped devices, none were available and so the collected data used its alternate SfM capabilities to directly output three-dimensional mesh files ([Niantic, Inc. 2022](#)). Upon arrival at each site, any significant small features (such as cannon, anchors, small buildings or structures, etc.) were scanned individually. If possible, this was followed by a full-site or structure scan in which team members left the device continually recording, passing it from one to the other when necessary and taking care to not include the body of any person in the captured images when doing so. This was done wherever possible, though because of the application's distance limit of 5m ([Basílio et al. 2022](#); [Niantic, Inc. 2022](#)), some structures were too tall, too distant, or too precariously located to record fully.

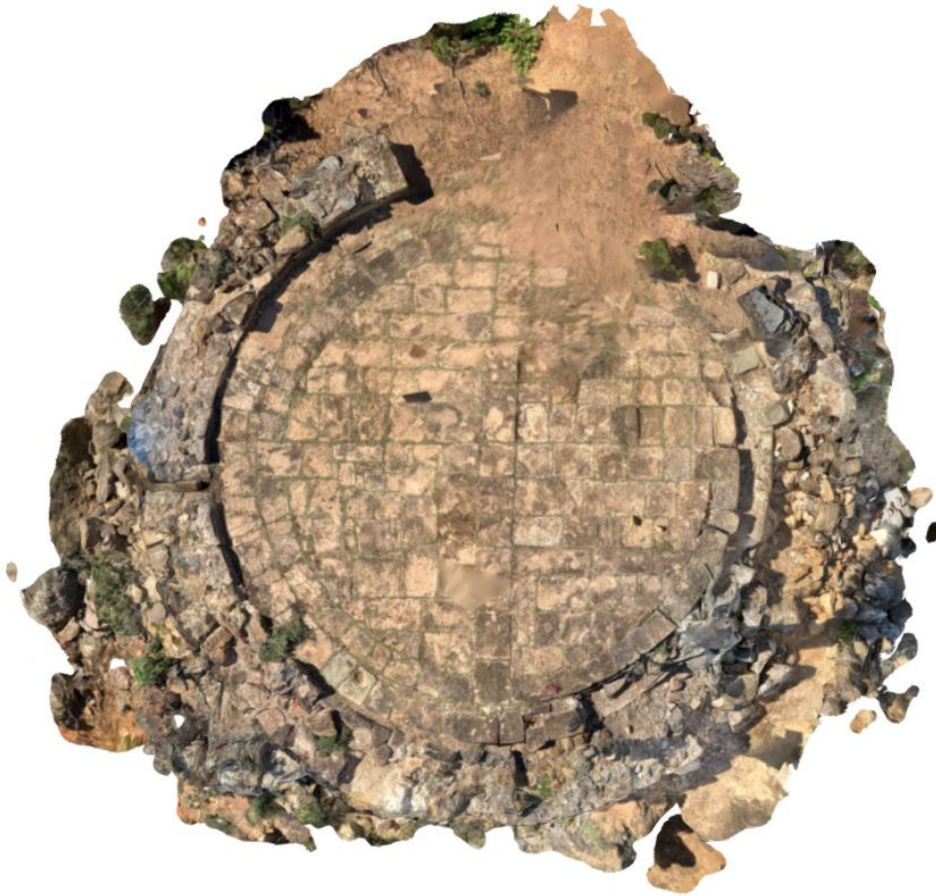


FIGURE 3.8. Aerial perspective for the LiDAR scan of Keane's Battery (Image by Madison Elsner, Dayan Weller, Nick Baker, DJ Schaefer, Logan Willis, ECU, 2022).

#### Section 4: Snorkel Survey

##### *Historical Background*

Although the primary focus of ECU's Antigua Fall 2022 Field School was the excavation of the Tank Bay Wreck, English Harbour's rich surrounding history could not be overlooked. As the archaeological remains and archival history of the dockyard stretches far beyond the reaches of the suspected Continental blockade runner, the exploration of other parts of the dockyard to provide additional context around the remains of *Lyon* was also critical as many of these archaeological remains have not been thoroughly examined.

Of these remains, the waters immediately surrounding Fort Berkeley falls into this category. As the primary fortification of the Harbour used to protect its narrow entry point, the decision to explore the waters around the cliffs of the fort warranted a plethora of new artifacts and Harbour features that tells the tale of the different types of vessels that entered the dockyard and how they interacted with this fortification. The peninsula of land that narrows the mouth of the Harbour significantly was the chosen location of the first permanent fortification to be built in defense of the dockyard in 1704. A small redoubt was constructed for several cannons at the tip of the peninsula by wealthy planters along with a guard house to accommodate the troops in the region for the purpose of attracting the Royal Navy to house their warships within the harbour along with a guard house to accommodate the troops (Nicholson 1994: 16-18). As English Harbour grew in importance, Fort Berkeley was improved upon with the construction of two long fortifications to the west of the original redoubt for the purpose of increasing the amount of cannons that could be held in the fort in 1744. While the first of these line fortifications specified as “battery A” was built by the islanders and could hold 12 additional guns, the second line known as “battery B” was constructed by Royal Navy Engineers and could hold another 10 guns, bringing the number of guns within Fort Berkeley up to 29 that ranged between either 24 or 18 pounders (Nicholson 1994: 16-18). The completion of Berkeley presented a deadly defense for any hostile vessel attempting to enter harbour as it had to present itself side on to the fort for it to make entry. The defenses of Berkeley were never tested and remains in a relatively stable condition today with the exception of some areas being threatened by erosion processes.

As the years continued to go by, Fort Berkeley was finally provided with a proper magazine in 1811 for the storage of the ammunition meant for the guns that lined its walls. This

37x21ft magazine was able to hold up to 300 barrels of powder along with cooperage (Nicholson 1994: 16-18). Other additions also included the installation of a large cannon protruding up at ninety degrees from an outcropping at the tip of the peninsula it was constructed upon. Leading explanations as to the purpose of this cannon include its usage as a bollard to warp vessels into the harbour in a slingshot manner or its use as one of two attaching points for a boom chain that would have stretched across the mouth of the harbour to Horseshoe Battery. Other remains of possible support structures to support this gun also include an iron nail and buttons that feed into Berkeley through a gunport on the redoubt that comes off at an angle that aligns with these support structures shows how this apparatus may have been controlled from the inside of the fortifications.

### *Methodology*

The water surrounding the peninsula that Fort Berkeley sits atop of had not been thoroughly explored prior to the ECU's Fall 2022 Field School and was an area that provided a plethora of information concerning how vessels interacted with Berkeley upon their entry into the harbour. The snorkel search that followed yielded several new features that can help to present a better idea of the workings of the harbour and how Berkeley fits into this framework.

The peninsula of Fort Berkeley has water depths that range from 5-12 meters with perfect visibility that make scuba equipment unnecessary to complete an effective search and allows snorkel kits to be used instead. In total, 7 field school members were involved in order to provide comprehensive coverage of a search pattern that began at the pier which rested alongside the original wall of English harbour meant to provide protection for sailors as well as keep them from deserting. The selected search method made use of all 7 field school members spreading

out adjacent to the shoreline with approximately 3 meters between each individual. The search party then moved parallel to the shoreline until it reached Fort Berkeley and completed its search after it had rounded the peninsula. As the peninsula produced a strong tidal effect that caused water to run quickly along this shoreline during storms could take smaller objects with it, searching this shoreline prior to reaching Berkeley was critical to provide complete coverage of the intended area.

After creating the search line, all field school members maintained the line and distances between one another while they searched. In the event something was found, the member who made the discovery signaled the search line to stop. After this occurred, one field school member that possessed a Garmin GPS unit marked the location of the object or feature while a second member recorded these coordinates a second time in writing as well as what the object was on mylar paper. After a record was completed, the search line continued to move as one unit again.

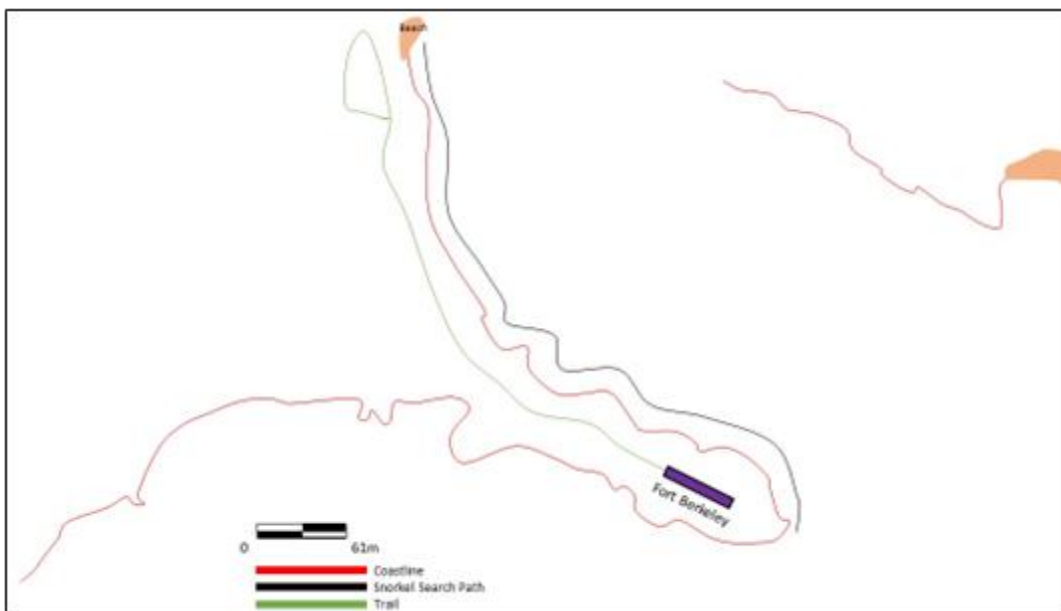


FIGURE 4.1. Snorkel survey around Fort Berkeley. (Map by Aero O’Hanlon, ECU, 2022.)



FIGURE 4.2. Snorkel survey path around Fort Berkeley. (Map by Aero O’Hanlon, ECU, 2022.)

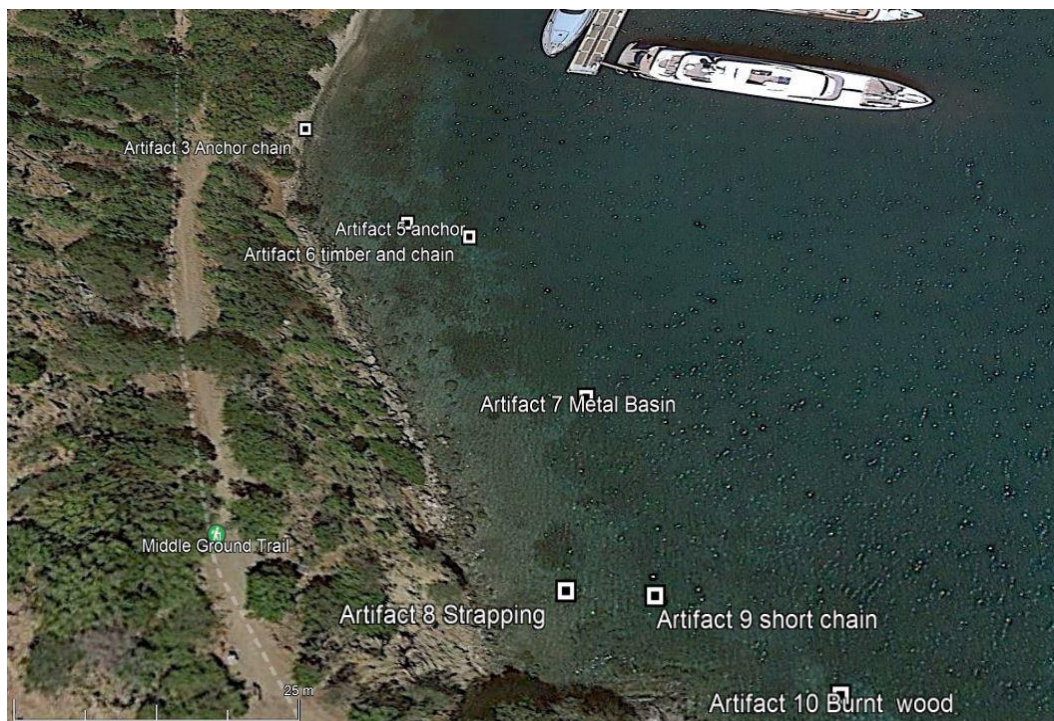


FIGURE 4.3. Artifact locations recorded during the snorkel survey (Map by Nicholas Baker)

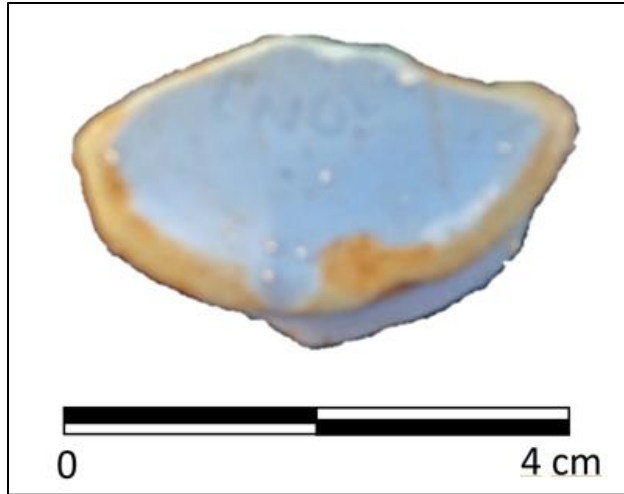


FIGURE 4.4. Ceramic base with part of English stamp visible (Photo by Katelyn Rollins, ECU, 2022.)

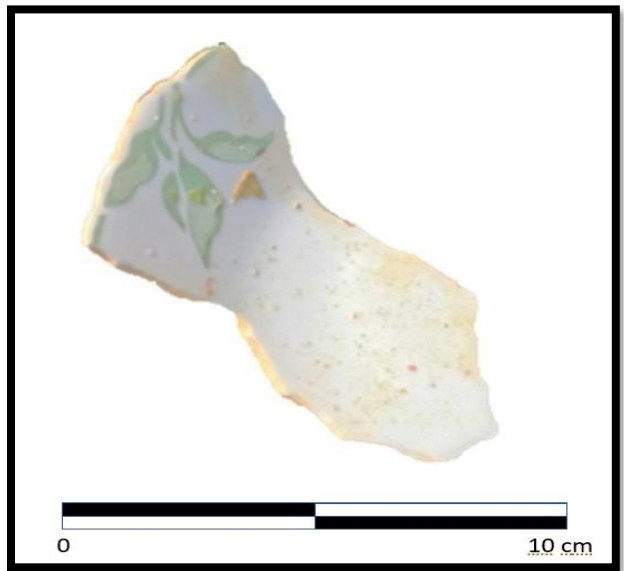


FIGURE 4.5. Ceramic plate fragment (Photo by Katelyn Rollins, ECU, 2022.)



FIGURE 4.6. Exposed Anchor (Photo by Katelyn Rollins, ECU, 2022.)

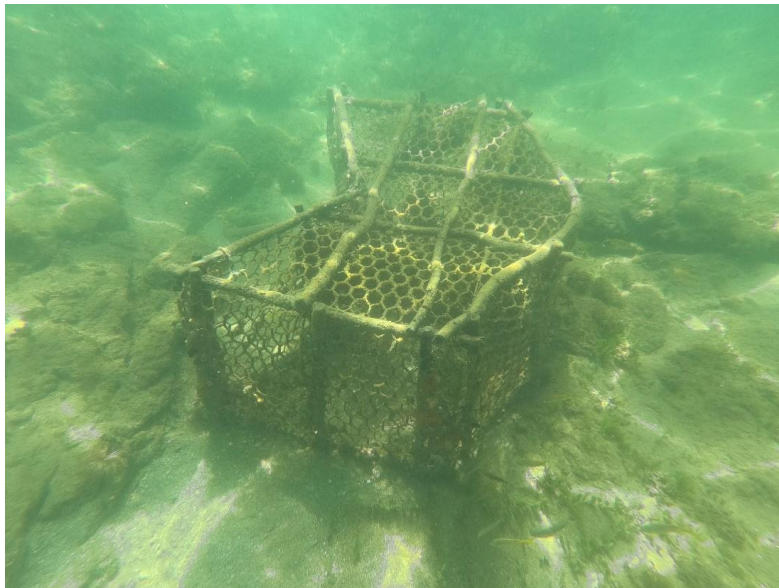


FIGURE 4.7. Modern Fishing Trap (Photo by Katelyn Rollins, ECU, 2022.)





FIGURE 4.8. Mooring Block with Chain. (Photo by Katelyn Rollins, ECU, 2022.)

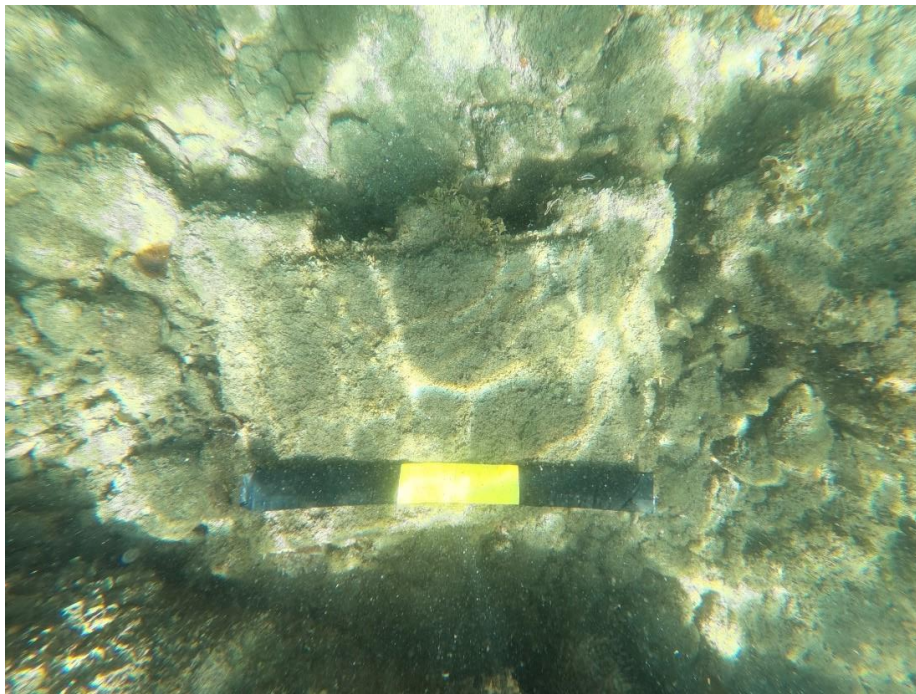


FIGURE 4.9. Cut stone from Fort Berkeley's Wall. (Photo by Katelyn Rollins, ECU, 2022.)

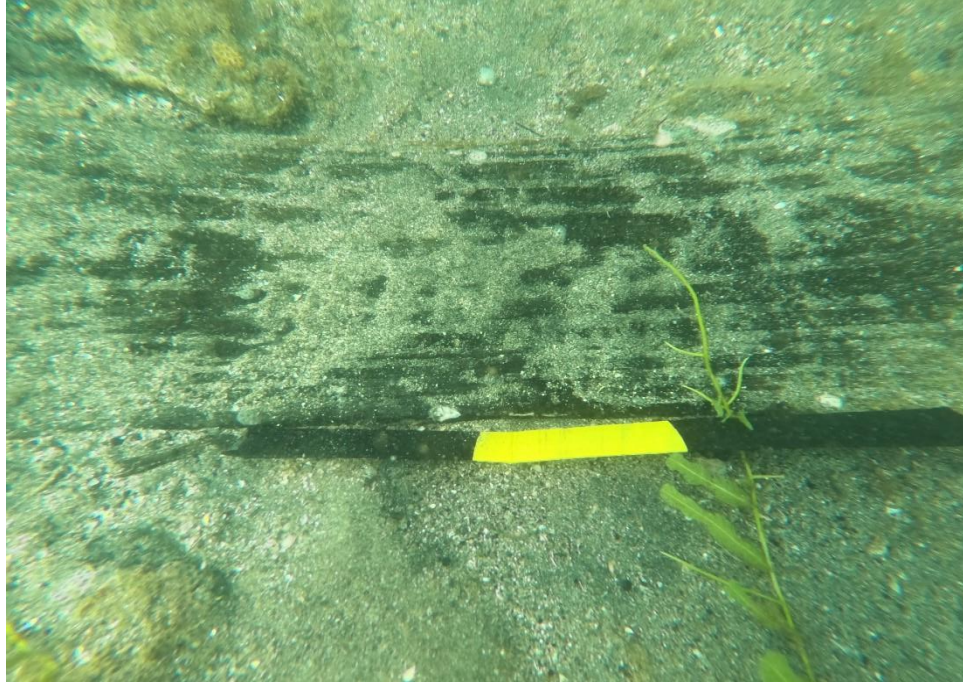


FIGURE 4.10. Unknown Timber Section. (Photo by Katelyn Rollins, ECU, 2022.)



FIGURE 4.11. Hook in cliff wall near stairs of Fort Berkeley. (Photo by Katelyn Rollins, ECU, 2022.)



FIGURE 4.12. Artifact locations documented during snorkel survey. See Appendix C (Plotted by Nicholas Baker, ECU, 2022)

## Section 5: Breezeway Graffiti

### *Historical Background*

According to the UNESCO World Heritage Site, historical graffiti is pre-20th century inscriptions or figure drawings carved into walls or pottery. The Caribbean has numerous graffiti findings that often date to the colonial era (Lace et al. 2019), however in Antigua there is graffiti related to the period of the Second World War (WWII). The field school recorded graffiti located within the breezeway and adjacent office of the former Naval Officer's Quarters. During World War II, the West India Regiment and Caribbean Regiment occupied Nelson's Dockyard, where servicemen who were stationed there carved their initials and dates into the walls. Since then, the breezeway has been painted over multiple times, making some graffiti illegible.

English Harbour was used as a barracks and training facility for Antiguan contingent soldiers of the West India Regiment in Antigua. The history of the regiment goes back to its founding in 1795. The breezeway of the observed graffiti was constructed in the late 1800s. This

is likely through the consolidation of the regiment into two battalions in 1888, where 1st battalion consisted of Antiguan recruits (Healy 2000:70). The regiment had significant combat experience. In the late 1800s, the regiment was heavily engaged in the Ashanti War of West Africa. The British military utilized West Indian soldiers for their disease immunity in West Africa (Healy 2000:68).

The regiment was utilized in a similar role in East Africa during the First World War against the German territories from 1914 to 1918. To fill additional labor needs, the British West India Regiment was formed as a volunteer fighting force of 12 battalions and 16,000 volunteers (Puri & Putnam 2017:41). This force fought in Palestine from 1917-1918 and was part of the force to capture Jerusalem from the Ottoman Turks in 1918 (Wilson 2021:122). The British East India Regiment was disbanded after the war. The East India Regiment and its two battalions also were disbanded shortly after, and its colors were officially cased in 1927 (Healy 2000:72).

Notably, there was much graffiti, primarily names and dates, from the 1940s in the breezeways and multiples from 1944. In April 1944, the Caribbean Regiment was formed of 1200 volunteers (Dyde 2000:223). On the enlistment roster are two Antiguan officers and 72 enlisted soldiers (War Diary of 1/CR, Orders for Embarkation 1945). The Antiguan soldiers were likely recruited and consolidated at English Harbuor, where they could undertake basic training. Further training was conducted at Fort Eustis near Williamsburg, VA, from May to June 1944 (Healy 2000:81). In June 1944, the Caribbean Regiment left for occupational duties in Italy. In October 1944, until the end of the war, the Regiment was sent to Egypt, where it guarded German prisoners of war (Healy 2000:82). The Caribbean Regiment was then returned to the Caribbean and disbanded in early 1946 (Healy 2000:85).

## *Methodology*

The intention was to record the graffiti in detail and its location with the breezeway and the office. A couple methods were attempted, one of which did not succeed. An attempt with recording using LiDAR (Light Detection and Ranging) via an app called “Scaniverse” was unsuccessful. It is likely that the glossy white paint coating the walls did not allow for enough texture to be recorded to create a mesh.

Thus, the team opted to take individual photographs of the breezeway and office as the primary form of recording. The pictures were taken using the Nikon DSLR camera and implementing a scale to capture each name. The team started by taking pictures at eye level with a scale. The team photographer used a two-step pace count, allowing the pictures to overlap. A ladder was then employed using the same step pace count technique to capture the higher levels of the wall while using a scale for reference. Lastly, the team captured the bottom level of the walls using the same technique in the unlikely case of engravings on the lower levels.



FIGURE 5.1. R.K. Arbuthnot Engraving. (Photo by Daniel Schaefer, ECU, 2022).

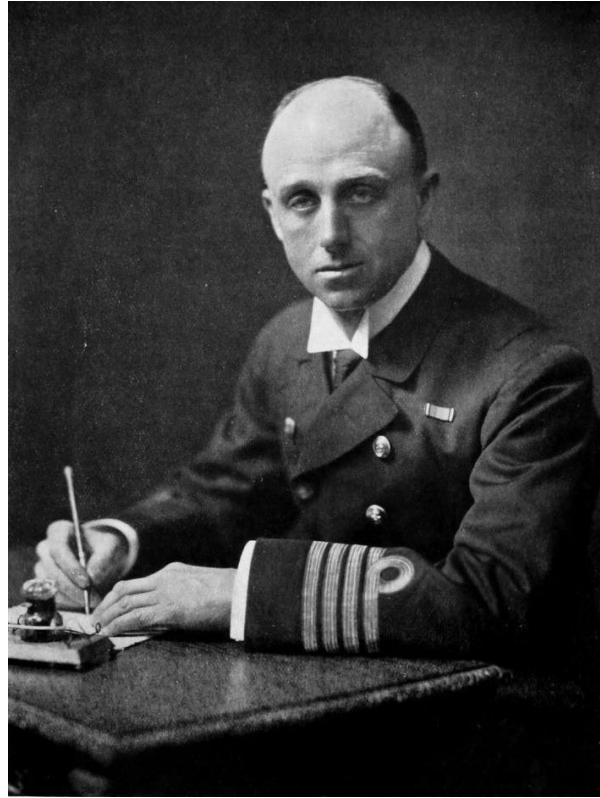


FIGURE 5.2. Rear-Admiral Sir Robert Keith Arbuthnot (Photo courtesy of [Arbuthnot 1920:324](#)).

### *Discussion*

With termite damage and the age of the wood used, the Dockyard is considering replacing the walls, which ultimately means destroying all graffiti. Primarily, the images uncovered with the Nikon DSLR will be used to preserve and interpret the engraved graffiti. The historical context will be preserved by having the team document the graffiti and cross-reference the names and dates of the graffiti individual through archival research. Although that process has not yet begun, one set of graffiti was identified to a specific individual.

In one of the rooms of the Naval Officer's Quarters, now a real estate office, there was a name carved into the wall that is still defined and readable. The name R.K. Arbuthnot, along with the date May 1889, is now framed in this office. The engraving is believed to be that of

Rear-Admiral Sir Robert Keith Arbuthnot, 4th Baronet. It was potentially framed as a memorial because Arbuthnot notably lost his life in 1916 during the Battle of Jutland (Gordon 1996:445). He would have been a 26-year-old junior naval lieutenant stationed in Antigua. He also officially succeeded to his father's baronetcy on 5 June 1889, and the engraving potentially marks the event (Bonnett 1968:114). Additional research to identify other names and associations with the regiment are underway.

## Section 6: UNESCO/UNTWIN Workshops

The Program in Maritime Studies is a full partner in the UNESCO/UNTWIN Underwater Archaeology Network. Established in 2012, the network “bring together University programs, research centers, and museums dedicated to increasing capacity and enhancing the protection of underwater cultural heritage. The Network supports the work of the UNESCO Secretariat of the 2001 Convention on the Protection of Underwater Cultural Heritage.

There are a number of objectives the Network focuses on, but “act(ing) as a bridge between the academic world, civil society, local communities, research and policy-makers, promoting awareness of underwater cultural heritage and influencing cultural heritage policies,” is the objective that was utilized as part of the training. During the field school ECU faculty, staff, and students offered a training workshop to local commercial, recreational, and professional divers, in addition to NPA cultural resource manager s(Appendix F). Participants included Desley Gardner of the National Parks Authority of Antigua and Barbuda, Louis Evans of DiveCarib, Kelshon Joseph and Jordan Otto of K. Hood Diving, Wilmer Duran of Indigo Divers and Soul

Immersion, Kweesi Gyan and Joshua Tubbs of Soul Immersion, Maurice A. Belgrave, and Omory Williams of Water Services.

The training included powerpoint presentations followed by hands on terrestrial training in archaeological methods, and finally an invitation to visit and participate in archaeological fieldwork. Trainees were given a certificate of completion after the training and a final discussion about “next steps” was fruitful in identifying where the Parks authorities could engage the diving community in heritage management and monitoring. Participants were also offered a follow-up training to attend with the Florida Public Archaeology Network free of charge.



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## APPENDIX A: Photograph Inventory

### Photo Log

**Project:** Fall Field School 2022  
**Site:** Nelson's Dockyard National Park, Antigua

| FILE#    | DETAILED DESCRIPTION (Site, Feature, Context, Artifact, etc.)                       | FULL NAME                   | DATE       | CAMERA MODEL  |
|----------|---|-----------------------------|------------|---------------|
| DSC_0001 | Group tour of Nelson's Dockyard at stone quay                                       | Jeremy Borrelli             | 10/17/2022 | NIKON D3400   |
| DSC_0002 | Group tour of Nelson's Dockyard at stone quay                                       | Jeremy Borrelli             | 10/17/2022 | NIKON D3400   |
| DSC_0004 | Group tour walking through Dockyard   | Jeremy Borrelli             | 10/17/2022 | NIKON D3400   |
| DSC_0005 | Group tour at Admiral's Inn   | Jeremy Borrelli             | 10/17/2022 | NIKON D3400   |
| DSC_0006 | Group tour at Sail Loft Pillars   | Jeremy Borrelli             | 10/17/2022 | NIKON D3400   |
| DSC_0007 | Group tour at Sail Loft Pillars   | Jeremy Borrelli             | 10/17/2022 | NIKON D3400   |
| DSC_0008 | Group tour walking through Dockyard   | Jeremy Borrelli             | 10/17/2022 | NIKON D3400   |
| DSC_0009 | Students examining cannon from Fraternite   | Jeremy Borrelli             | 10/17/2022 | NIKON D3400   |
| DSC_0010 | Dockyard wall looking south from Dockyard   | Jeremy Borrelli             | 10/17/2022 | NIKON D3400   |
| DSC_0011 | Graffiti on breezeway walls   | Jeremy Borrelli             | 10/17/2022 | NIKON D3400   |
| DJI_0012 | English Dockyard at Ops Center with Dayan, Madie, Ray, Liv, and Harris              | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |
| DJI_0013 | English Dockyard overlooking rebuilt dock with dock under survey in the background. | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |
| DJI_0014 | English Dockyard aerial   | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |
| DJI_0015 | English Dockyard aerial   | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |
| DJI_0016 | English Dockyard aerial   | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |
| DJI_0017 | English Dockyard aerial   | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |
| DJI_0020 | English Dockyard aerial   | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |
| DJI_0021 | English Dockyard aerial   | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |
| DJI_0022 | 19 second video of English Dockyard aerial view                                     | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |
| DJI_0023 | English Dockyard aerial with dive ops center  | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |
| DJI_0024 | Nadir Aerial View of Madie and Dayan on Dive Barge, Far                             | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |
| DJI_0025 | Nadir Aerial View of Madie and Dayan on Dive Barge, Close                           | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |
| DJI_0026 | Forward View of Madie and Dayan Donning on Dive Barge, Close                        | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |
| DJI_0027 | Forward View of Madie and Dayan Donning on Dive Barge, Close                        | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |



|          |   |                             |            |               |
|----------|---|-----------------------------|------------|---------------|
| DJI_0028 | Aerial Forward View of English Harbour/Tank Bay, Facing West  | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |
| DJI_0029 | Aerial Forward View of English Harbour/Tank Bay, Facing West  | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |
| DJI_0030 | Aerial Forward View of English Harbour/Tank Bay, Facing West  | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |
| DJI_0031 | Jeremy teaching drone operation to Ray, Liv, Maddie, and Dayan at English Harbour Bar                   | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |
| DJI_0032 | Aerial Forward View of Nelson's Dockyard Historic Site, South   | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |
| DJI_0033 | Forward Aerial View of Nelson's Dockyard Historic Site, Closeup on Staff Tent Area, Divers in the Water | Logan, Ian, DJ, and Katelyn | 10/18/2022 | DJI Mavic Pro |
| DSC_0477 | Cannon1_Side Perspective  | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0478 | Cannon1_Side Perspective  | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0479 | Cannon1_Front Perspective   | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0480 | Cannon1_Front Perspective   | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0481 | Cannon2_Side Perspective  | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0482 | Cannon2_Side Perspective  | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0483 | Cannon2_Front Perspective   | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0484 | Cannon2_Front Perspective   | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0485 | Cannon3_Side Perspective  | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0486 | Cannon3_Side Perspective  | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0487 | Cannon3_Top Perspective   | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0488 | Cannon3_Top Perspective   | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0489 | Cannon4_Side Perspective  | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0490 | Cannon4_Side Perspective  | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0491 | Cannon4_Top Perspective   | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0492 | Cannon4_Top Perspective   | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0493 | Cannon5_Side Perspective  | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0494 | Cannon5_Side Perspective  | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0495 | Cannon5_Top Perspective   | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0496 | Cannon5_Top Perspective   | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0497 | Cannon6_Side Perspective  | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0498 | Cannon6_Side Perspective  | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |
| DSC_0499 | Cannon6_Top Perspective   | Nick,Dayan,Logan            | 10/19/2022 | NIKON D3400   |

|          |                                      |                  |            |             |
|----------|--------------------------------------|------------------|------------|-------------|
| DSC_0500 | Cannon6_Top Perspective              | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0501 | Cannon7_Side Perspective             | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0502 | Cannon7_Side Perspective             | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0503 | Cannon7_Front Perspective            | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0504 | Cannon7_Front Perspective            | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0505 | Cannon8_Side Perspective             | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0506 | Cannon8_Side Perspective             | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0507 | Cannon8_Front Perspective            | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0508 | Cannon8_Front Perspective            | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0509 | Cannon9_Side Perspective             | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0510 | Cannon9_Side Perspective             | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0511 | Cannon9_Top Perspective              | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0512 | Cannon9_Top Perspective              | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0513 | Cannon10_Side Perspective            | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0514 | Cannon10_Side Perspective            | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0515 | Cannon10_Side Perspective            | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0516 | Cannon10_Top Perspective             | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0517 | Cannon11_Side Perspective            | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0518 | Cannon11_Side Perspective            | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0519 | Cannon11_Top Perspective             | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0520 | Cannon11_Top Perspective             | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0521 | Cannon12_Side Perspective            | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0522 | Cannon12_Side Perspective            | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0523 | Cannon12_Top Perspective             | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0524 | Cannon12_Top Perspective             | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0525 | Cannon13_Side Perspective            | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0526 | Cannon13_Side Perspective            | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0527 | Cannon13_Front Perspective           | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0528 | Cannon13_Front Perspective           | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0529 | Cannon14_Side Perspective(Carronade) | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0530 | Cannon14_Side Perspective(Carronade) | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |

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| DSC_0531 | Cannon14_Front Perspective(Carronade)  | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0532 | Cannon14_Front Perspective (Carronade) | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0533 | Cannon15_Side Perspective              | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0534 | Cannon15_Side Perspective              | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0535 | Cannon15_Front Perspective             | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0536 | Cannon15_Front Perspective             | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0537 | Cannon16_Side Perspective (Carronade)  | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0538 | Cannon16_Side Perspective (Carronade)  | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0539 | Cannon16_Front Perspective (Carronade) | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0540 | Cannon16_Front Perspective (Carronade) | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0541 | Cannon17_Side Perspective              | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0542 | Cannon17_Side Perspective              | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0543 | Cannon17_Top Perspective               | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0544 | Cannon17_Top Perspective               | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0545 | Cannon18_Side Perspective              | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0546 | Cannon18_Side Perspective              | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0547 | Cannon18_Rear Perspective              | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0548 | Cannon18_Rear Perspective              | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0549 | Cannon19_Side Perspective (Carronade)  | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0550 | Cannon19_Side Perspective (Carronade)  | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0551 | Cannon19_Front Perspective (Carronade) | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0552 | Cannon19_Front Perspective (Carronade) | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0553 | Cannon20_Side Perspective              | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0554 | Cannon20_Side Perspective              | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0555 | Cannon20_Top Perspective               | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0556 | Cannon20_Top Perspective               | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0557 | Cannon21_Side Perspective              | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0558 | Cannon21_Side Perspective              | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0559 | Cannon21_Top Perspective               | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0560 | Cannon21_Top Perspective               | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0561 | Cannon22_Side Perspective              | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |

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| DSC_0562 | Cannon22_Side Perspective                    | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0563 | Cannon22_Top Perspective                     | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0564 | Cannon22_Top Perspective                     | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0565 | Cannon23_Side Perspective                    | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0566 | Cannon23_Side Perspective                    | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0567 | Cannon23_Top Perspective                     | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0568 | Cannon23_Top Perspective                     | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0569 | Cannon24_Side Perspective                    | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0570 | Cannon24_Side Perspective                    | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0571 | Cannon24_Top Perspective                     | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0572 | Cannon24_Top Perspective                     | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0573 | Cannon27_Side Perspective                    | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0574 | Cannon27_Side Perspective                    | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0575 | Cannon27_Top Perspective                     | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0576 | Cannon27_Top Perspective                     | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0577 | Cannon29_Side Perspective                    | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0578 | Cannon29_Side Perspective                    | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0579 | Cannon29_Top Perspective                     | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0580 | Cannon29_Top Perspective                     | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0581 | Cannon30_Side Perspective (Capped with Iron) | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0582 | Cannon30_Side Perspective (Capped with Iron) | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0583 | Cannon31_Side Perspective                    | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0584 | Cannon31_Side Perspective                    | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0585 | Cannon31_Top Perspective                     | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0586 | Cannon31_Top Perspective                     | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0587 | Cannon32_Side Perspective                    | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0588 | Cannon32_Side Perspective                    | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0589 | Cannon32_Top Perspective                     | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0590 | Cannon32_Top Perspective                     | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0591 | Cannon33_Side Perspective                    | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0592 | Cannon33_Side Perspective                    | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |

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| DSC_0593 | Cannon33_Top Perspective                      | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0594 | Cannon33_Top Perspective                      | Nick,Dayan,Logan | 10/19/2022 | NIKON D3400 |
| DSC_0595 | Cannon13_Makers mark "1793"                   | Nick             | 10/19/2022 | NIKON D3400 |
| DSC_0596 | Cannon13_Makers mark "1793"                   | Nick             | 10/19/2022 | NIKON D3400 |
| DSC_0597 | Cannon13_Makers mark "Creusot"                | Nick             | 10/19/2022 | NIKON D3400 |
| DSC_0598 | Cannon13_Makers mark "Creusot"                | Nick             | 10/19/2022 | NIKON D3400 |
| DSC_0599 | Cannon13_Makers mark 3 words                  | Nick             | 10/19/2022 | NIKON D3400 |
| DSC_0600 | Cannon13_Makers mark 3 words                  | Nick             | 10/19/2022 | NIKON D3400 |
| DSC_0475 | Group measuring Fort Berkeley erosion         | Jeremy Borrelli  | 10/20/2022 |             |
| DSC_0476 | Group measuring Fort Berkeley erosion         | Jeremy Borrelli  | 10/20/2022 |             |
| DSC_0477 | Group measuring Fort Berkeley erosion         | Jeremy Borrelli  | 10/20/2022 |             |
| DSC_0478 | Guardhouse with English Harbour in background | D.J. Schaefer    | 10/20/2022 |             |
| DSC_0479 | Guardhouse with English Harbour in background | D.J. Schaefer    | 10/20/2022 |             |
| DSC_0480 | Guardhouse_Front Perspective                  | D.J. Schaefer    | 10/20/2022 |             |
| DSC_0481 | Guardhouse_Front Perspective                  | D.J. Schaefer    | 10/20/2022 |             |
| DSC_0482 | Guardhouse_Right Side Perspective             | D.J. Schaefer    | 10/20/2022 |             |
| DSC_0483 | Guardhouse_Right Perspective                  | D.J. Schaefer    | 10/20/2022 |             |
| DSC_0484 | Guardhouse_Left Side Perspective              | D.J. Schaefer    | 10/20/2022 |             |
| DSC_0485 | Guardhouse_Rear Perspective                   | D.J. Schaefer    | 10/20/2022 |             |
| DSC_0486 | Guardhouse_Rear Perspective                   | D.J. Schaefer    | 10/20/2022 |             |
| DSC_0487 | Guardhouse_Rear Perspective                   | D.J. Schaefer    | 10/20/2022 |             |
| DSC_0488 | Guardhouse_Rear Perspective                   | D.J. Schaefer    | 10/20/2022 |             |
| DSC_0489 | Guardhouse_Rear Perspective                   | D.J. Schaefer    | 10/20/2022 |             |
| DSC_0490 | Guardhouse_Rear Perspective                   | D.J. Schaefer    | 10/20/2022 |             |
| DSC_0491 | Guardhouse_Rear Perspective                   | D.J. Schaefer    | 10/20/2022 |             |
| DSC_0492 | Guardhouse_Rear Perspective                   | D.J. Schaefer    | 10/20/2022 |             |
| DSC_0493 | Guardhouse_Rear Perspective                   | D.J. Schaefer    | 10/20/2022 |             |
| DSC_0494 | Guardhouse_Front Perspective                  | D.J. Schaefer    | 10/20/2022 |             |
| DSC_0495 | Guardhouse_Front Stairs                       | D.J. Schaefer    | 10/20/2022 |             |
| DSC_0496 | Guardhouse_Inside_Front Perspective           | D.J. Schaefer    | 10/20/2022 |             |
| DSC_0497 | Guardhouse_Inside_Right Perspective           | D.J. Schaefer    | 10/20/2022 |             |

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| DSC_0498 | Guardhouse_Inside_Roofing                              | D.J. Schaefer | 10/20/2022 |
| DSC_0499 | Guardhouse_Inside_Right Perspective                    | D.J. Schaefer | 10/20/2022 |
| DSC_0500 | Guardhouse_Inside_Right Perspective                    | D.J. Schaefer | 10/20/2022 |
| DSC_0501 | Guardhouse_Inside_Left Perspective                     | D.J. Schaefer | 10/20/2022 |
| DSC_0502 | Guardhouse_Inside_Looking Out Perspective              | D.J. Schaefer | 10/20/2022 |
| DSC_0503 | Guardhouse_Inside_Front Window                         | D.J. Schaefer | 10/20/2022 |
| DSC_0504 | Guardhouse_Inside_Right Window                         | D.J. Schaefer | 10/20/2022 |
| DSC_0505 | Guardhouse_Inside_Rear Window                          | D.J. Schaefer | 10/20/2022 |
| DSC_0506 | Guardhouse_Inside_Rear Window Perspective              | D.J. Schaefer | 10/20/2022 |
| DSC_0507 | Guardhouse_Inside_Right Window Perspective             | D.J. Schaefer | 10/20/2022 |
| DSC_0508 | Guardhouse_Front Doorway Perspective                   | D.J. Schaefer | 10/20/2022 |
| DSC_0509 | Guardhouse_Front Doorway Perspective                   | D.J. Schaefer | 10/20/2022 |
| DSC_0510 | Guardhouse_Front Doorway Perspective                   | D.J. Schaefer | 10/20/2022 |
| DSC_0511 | Guardhouse_94cm Scale                                  | D.J. Schaefer | 10/20/2022 |
| DSC_0512 | Guardhouse_94cm Scale                                  | D.J. Schaefer | 10/20/2022 |
| DSC_0513 | Guardhouse_Inside_Rear Window Perspective              | D.J. Schaefer | 10/20/2022 |
| DSC_0514 | Guardhouse_Front Perspective                           | D.J. Schaefer | 10/20/2022 |
| DSC_0515 | Guardhouse_Front Perspective                           | D.J. Schaefer | 10/20/2022 |
| DSC_0516 | Guardhouse_Right Perspective                           | D.J. Schaefer | 10/20/2022 |
| DSC_0517 | Guardhouse_Inside Right Perspective                    | D.J. Schaefer | 10/20/2022 |
| DSC_0518 | Guardhouse_Inside Looking Out Perspective              | D.J. Schaefer | 10/20/2022 |
| DSC_0519 | Guardhouse_Inside_Left Perspective                     | D.J. Schaefer | 10/20/2022 |
| DSC_0520 | Guardhouse_Inside_Right Window                         | D.J. Schaefer | 10/20/2022 |
| DSC_0521 | Guardhouse_Inside_Front Window                         | D.J. Schaefer | 10/20/2022 |
| DSC_0522 | Guardhouse_Inside_Doorway                              | D.J. Schaefer | 10/20/2022 |
| DSC_0523 | Gunpowder Magazine_Outside stairway to English Harbour | Madie Elsner  | 10/20/2022 |
| DSC_0524 | Gunpowder Magazine_Outside stairway to English Harbour | Madie Elsner  | 10/20/2022 |
| DSC_0525 | Gunpowder Magazine_Front Side Perspective              | Madie Elsner  | 10/20/2022 |
| DSC_0526 | Gunpowder Magazine_Front Perspective                   | Madie Elsner  | 10/20/2022 |
| DSC_0527 | Gunpowder Magazine_Left Perspective                    | Madie Elsner  | 10/20/2022 |
| DSC_0528 | Gunpowder Magazine_Right Perspective                   | Madie Elsner  | 10/20/2022 |

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| DSC_0529 | Gunpowder Magazine_Front Entrance Engraving-1 | Madie Elsner    | 10/20/2022 |
| DSC_0530 | Gunpowder Magazine_Front Entrance Engraving-1 | Madie Elsner    | 10/20/2022 |
| DSC_0531 | Gunpowder Magazine_Front Entrance Engraving-2 | Madie Elsner    | 10/20/2022 |
| DSC_0532 | Gunpowder Magazine_Front Entrance Engraving-3 | Madie Elsner    | 10/20/2022 |
| DSC_0533 | Gunpowder Magazine_Inside_Right Perspective   | Madie Elsner    | 10/20/2022 |
| DSC_0534 | Gunpowder Magazine_Inside_Wall Texture        | Madie Elsner    | 10/20/2022 |
| DSC_0535 | Gunpowder Magazine_Inside_Left Perspective    | Madie Elsner    | 10/20/2022 |
| DSC_0536 | Gunpowder Magazine_Entrance                   | Madie Elsner    | 10/20/2022 |
| DSC_0537 | Group photo at One Gun Battery                | Jeremy Borrelli | 10/21/2022 |
| DSC_0538 | Group photo at One Gun Battery                | Jeremy Borrelli | 10/21/2022 |
| DSC_0539 | Logan at One Gun Battery                      | Jeremy Borrelli | 10/21/2022 |
| DSC_0540 | Dayan at One Gun Battery                      | Jeremy Borrelli | 10/21/2022 |
| DSC_0541 | Group photo at One Gun Battery                | Jeremy Borrelli | 10/21/2022 |
| DSC_0542 | Group photo at One Gun Battery                | Jeremy Borrelli | 10/21/2022 |
| DSC_0543 | DJ at One Gun Battery                         | Jeremy Borrelli | 10/21/2022 |
| DSC_0544 | DJ at One Gun Battery                         | Jeremy Borrelli | 10/21/2022 |
| DSC_0545 | Group photo on cliffs of One Gun Battery      | Jeremy Borrelli | 10/21/2022 |
| DSC_0546 | Madie at One Gun Battery                      | Jeremy Borrelli | 10/21/2022 |
| DSC_0547 | Fort Berkeley                                 | Jeremy Borrelli | 10/21/2022 |
| DSC_0548 | West India Regiment Cistern                   | Madie Elsner    | 10/21/2022 |
| DSC_0549 | West India Regiment Cistern                   | Madie Elsner    | 10/21/2022 |
| DSC_0550 | West India Regiment Cistern                   | Madie Elsner    | 10/21/2022 |
| DSC_0551 | West India Regiment Cistern                   | Madie Elsner    | 10/21/2022 |
| DSC_0552 | West India Regiment Cistern                   | Madie Elsner    | 10/21/2022 |
| DSC_0553 | West India Regiment Cistern                   | Madie Elsner    | 10/21/2022 |
| DSC_0554 | West India Regiment Cistern                   | Madie Elsner    | 10/21/2022 |
| DSC_0555 | West India Regiment Cistern                   | Madie Elsner    | 10/21/2022 |
| DSC_0556 | West India Regiment Cistern                   | Madie Elsner    | 10/21/2022 |
| DSC_0557 | West India Regiment Cistern                   | Madie Elsner    | 10/21/2022 |
| DSC_0558 | West India Regiment Cistern Catch Barrel      | Madie Elsner    | 10/21/2022 |
| DSC_0559 | West India Regiment Cistern Catch Barrel      | Madie Elsner    | 10/21/2022 |

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| DSC_0560 | West India Regiment Cistern Drain                                      | Madie Elsner   | 10/21/2022 |
| DSC_0561 | West India Regiment Structure 4  | Madie Elsner   | 10/21/2022 |
| DSC_0562 | West India Regiment Structure 4  | Madie Elsner   | 10/21/2022 |
| DSC_0563 | Ceramic (Porcelain), found near West India Regiment Cistern            | Madie Elsner   | 10/21/2022 |
| DSC_0564 | Ceramic (Porcelain), found near West India Regiment Cistern            | Madie Elsner   | 10/21/2022 |
| DSC_0565 | Ceramic (Porcelain), found near West India Regiment Cistern            | Madie Elsner   | 10/21/2022 |
| DSC_0566 | West India Regiment Irrigation   | Madie Elsner   | 10/21/2022 |
| DSC_0567 | West India Regiment Irrigation   | Madie Elsner   | 10/21/2022 |
| DSC_0568 | West India Regiment Irrigation   | Madie Elsner   | 10/21/2022 |
| DSC_0569 | West India Regiment Irrigation   | Madie Elsner   | 10/21/2022 |
| DSC_0570 | West India Regiment Irrigation   | Madie Elsner   | 10/21/2022 |
| DSC_0571 | West India Regiment Irrigation   | Madie Elsner   | 10/21/2022 |
| DSC_0572 | West India Regiment Structure 4  | Madie Elsner   | 10/21/2022 |
| DSC_0573 | Glass, found near West India Regiment Barracks                         | Nicholas Baker | 10/21/2022 |
| DSC_0574 | Bottle neck, found near West India Regiment Barracks                   | Nicholas Baker | 10/21/2022 |
| DSC_0575 | Bottle neck, found near West India Regiment Barracks                   | Nicholas Baker | 10/21/2022 |
| DSC_0576 | Porcelain, found near West India Regiment Barracks                     | Nicholas Baker | 10/21/2022 |
| DSC_0577 | Porcelain, found near West India Regiment Barracks                     | Nicholas Baker | 10/21/2022 |
| DSC_0578 | Porcelain, found near West India Regiment Barracks                     | Nicholas Baker | 10/21/2022 |
| DSC_0579 | Porcelain, found near West India Regiment Barracks                     | Nicholas Baker | 10/21/2022 |
| DSC_0580 | Porcelain, found near West India Regiment Barracks                     | Nicholas Baker | 10/21/2022 |
| DSC_0581 | Porcelain, found near West India Regiment Barracks                     | Nicholas Baker | 10/21/2022 |
| DSC_0582 | Porcelain, found near West India Regiment Barracks                     | Nicholas Baker | 10/21/2022 |
| DSC_0583 | Porcelain, found near West India Regiment Barracks                     | Nicholas Baker | 10/21/2022 |
| DSC_0584 | Porcelain, found near West India Regiment Barracks                     | Nicholas Baker | 10/21/2022 |
| DSC_0585 | Porcelain, found near West India Regiment Barracks                     | Nicholas Baker | 10/21/2022 |
| DSC_0586 | Porcelain, found near West India Regiment Barracks                     | Nicholas Baker | 10/21/2022 |
| DSC_0587 | Wine or onion bottle fragment, found near West India Regiment Barracks | Nicholas Baker | 10/21/2022 |
| DSC_0588 | Wine or onion bottle fragment, found near West India Regiment Barracks | Nicholas Baker | 10/21/2022 |
| DSC_0589 | Porcelain, found near West India Regiment Barracks                     | Nicholas Baker | 10/21/2022 |
| DSC_0590 | Lead musketball, found on cliffside near barracks storehouse           | Dayan Weller   | 10/21/2022 |



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| DSC_0591 | Group photo by barracks                 | Jeremy Borrelli          | 10/21/2022 |
| DSC_0592 | Madie and Dayan by cannon 36            | Jeremy Borrelli          | 10/21/2022 |
| DSC_0593 | Madie and Dayan by cannon 36            | Jeremy Borrelli          | 10/21/2022 |
| DSC_0594 | Madie and Dayan by cannon 36            | Jeremy Borrelli          | 10/21/2022 |
| DSC_0595 | Madie and Dayan by cannon 36            | Jeremy Borrelli          | 10/21/2022 |
| DSC_0596 | Madie and Dayan by cannon 36            | Jeremy Borrelli          | 10/21/2022 |
| DSC_0597 | Madie by cannon 36                      | Jeremy Borrelli          | 10/21/2022 |
| DSC_0598 | Galleon beach anchor                    | Jeremy Borrelli          | 10/21/2022 |
| DSC_0599 | Galleon beach anchor                    | Jeremy Borrelli          | 10/21/2022 |
| DSC_0600 | DJ and Nicholas by cannon 37            | Jeremy Borrelli          | 10/21/2022 |
| DSC_0601 | Nicholas by cannon 37                   | Jeremy Borrelli          | 10/21/2022 |
| DSC_0602 | DJ and Nicholas by cannon 37            | Jeremy Borrelli          | 10/21/2022 |
| DSC_0603 | Madie and Dayan by Galleon Beach Anchor | Jeremy Borrelli          | 10/21/2022 |
| DSC_0604 | Group recording Galleon Beach Anchor    | Jeremy Borrelli          | 10/21/2022 |
| DSC_0605 | Cannon37_Side Perspective               | Nicholas Baker           | 10/21/2022 |
| DSC_0606 | Cannon37_Side Perspective               | Nicholas Baker           | 10/21/2022 |
| DSC_0607 | Cannon37_Rear Perspective               | Nicholas Baker           | 10/21/2022 |
| DSC_0608 | Cannon37_Front Perspective              | Nicholas Baker           | 10/21/2022 |
| DSC_0609 | Cannon37_Front Perspective              | Nicholas Baker           | 10/21/2022 |
| DSC_0610 | Cannon36_Side Perspective               | Nicholas Baker           | 10/21/2022 |
| DSC_0611 | Cannon36_Side Perspective               | Nicholas Baker           | 10/21/2022 |
| DSC_0612 | Cannon36_Rear Perspective               | Nicholas Baker           | 10/21/2022 |
| DSC_0613 | Cannon36_Rear Perspective               | Nicholas Baker           | 10/21/2022 |
| DSC_0614 | Cannon36_Front Perspective              | Nicholas Baker           | 10/21/2022 |
| DSCF5002 | Unit 1 Keelson with Scale               | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5003 | Unit 1 Keelson with Scale               | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5004 | Unit 1 Plank                            | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5005 | Unit 1 Plank                            | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5006 | Unit 1                                  | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5007 | Unit 1 with Dredge Hose                 | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5008 | Unit 1 with Keelson and Scale           | Dr. Harris, Katelyn, Ray | 10/21/2022 |

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| DSCF5009 | Unit 1 Plank                      | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5010 | Unit 1                            | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5011 | Katelyn in Unit 1                 | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5012 | Unit 1 with Dredge Hose           | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5013 | Ray's Hand and Ballast            | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5014 | Katelyn Unit 1                    | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5015 | Ray and Dredge Hose               | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5016 | Ray and Dredge Hose               | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5017 | Ray and Dredge Hose               | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5018 | Unit 3 Lead Sheathing             | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5019 | Unit 3 Lead Sheathing             | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5020 | Unit 3 Corner                     | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5021 | Unit 3 Lead Sheathing             | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5022 | Unit 3 Corner with scale          | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5023 | Unit 3 Corner with Lead Sheathing | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5024 | Bottle                            | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5025 | Unit 3 Lead Sheathing             | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5026 | Unit 3 Lead Sheathing             | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5027 | Lead Sheathing with Scale         | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5028 | Unit 3 Lead Sheathing with Scale  | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5029 | Unit 3 Lead Sheathing with Scale  | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5030 | Lead Sheathing and Fish           | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5031 | Modern Rope                       | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5032 | Modern Rope                       | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5033 | Lead Bits                         | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5034 | Ray Recording                     | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5035 | Diver on Unit 3                   | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5036 | Katelyn Dredging                  | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5037 | Katelyn Dredging                  | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5038 | Katelyn Dredging                  | Dr. Harris, Katelyn, Ray | 10/21/2022 |
| DSCF5039 | Shell-edged Ceramic with Scale    | Dr. Harris, Katelyn, Ray | 10/21/2022 |

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| DSCF5040 | Shell-edged Ceramic with Scale          | Dr. Harris, Katelyn, Ray | 10/21/2022 |             |
| DSCF5041 | Shell-edged Ceramic with Scale          | Dr. Harris, Katelyn, Ray | 10/21/2022 |             |
| DSCF5042 | Bottle with Scale                       | Dr. Harris, Katelyn, Ray | 10/21/2022 |             |
| DSCF5043 | Bottle with Scale                       | Dr. Harris, Katelyn, Ray | 10/21/2022 |             |
| DSCF5044 | Bottle with Scale                       | Dr. Harris, Katelyn, Ray | 10/21/2022 |             |
| DSCF5045 | Bottle with Scale                       | Dr. Harris, Katelyn, Ray | 10/21/2022 |             |
| DSCF5046 | Bottle with Scale                       | Dr. Harris, Katelyn, Ray | 10/21/2022 |             |
| DSCF5047 | Bottle with Scale                       | Dr. Harris, Katelyn, Ray | 10/21/2022 |             |
| DSCF5048 | Bottle with Scale                       | Dr. Harris, Katelyn, Ray | 10/21/2022 |             |
| DSCF5049 | Proforma Unit 3                         | Dr. Harris, Katelyn, Ray | 10/21/2022 |             |
| DSCF5050 | Liv backroll                            | Dr. Harris, Katelyn, Ray | 10/21/2022 |             |
| DSC_0615 | Group photo at barge                    | Jeremy Borrelli          | 10/22/2022 | NIKON D3400 |
| DSC_0616 | Dredges                                 | Jeremy Borrelli          | 10/22/2022 | NIKON D3400 |
| DSC_0617 | Levi, Logan, Dr. McKinnon with tanks    | Jeremy Borrelli          | 10/22/2022 | NIKON D3400 |
| DSC_0618 | Dredges                                 | Jeremy Borrelli          | 10/22/2022 | NIKON D3400 |
| DSC_0619 | Levi, Logan, Dr. McKinnon in water      | Jeremy Borrelli          | 10/22/2022 | NIKON D3400 |
| DSC_0620 | Levi, Logan, Dr. McKinnon in water      | Jeremy Borrelli          | 10/22/2022 | NIKON D3400 |
| DSC_0629 | Small iron con. and poss. Ballast, U1L1 | Ian Dunshee              | 10/23/2022 | NIKON D3400 |
| DSC_0630 | Small iron con. and poss. Ballast, U1L1 | Ian Dunshee              | 10/23/2022 | NIKON D3400 |
| DSC_0631 | Small iron con. and poss. Ballast, U1L1 | Ian Dunshee              | 10/23/2022 | NIKON D3400 |
| DSC_0632 | Small iron con. and poss. Ballast, U1L1 | Ian Dunshee              | 10/23/2022 | NIKON D3400 |
| DSC_0633 | Small iron con. and poss. Ballast, U1L1 | Ian Dunshee              | 10/23/2022 | NIKON D3400 |
| DSC_0634 | Small iron con. and poss. Ballast, U1L1 | Ian Dunshee              | 10/23/2022 | NIKON D3400 |
| DSC_0635 | Small iron con. and poss. Ballast, U1L1 | Ian Dunshee              | 10/23/2022 | NIKON D3400 |
| DSC_0636 | Clay U1L2                               | Ian Dunshee              | 10/23/2022 | NIKON D3400 |
| DSC_0637 | Clay U1L3                               | Ian Dunshee              | 10/23/2022 | NIKON D3400 |
| DSC_0638 | Clay U1L4                               | Ian Dunshee              | 10/23/2022 | NIKON D3400 |
| DSC_0639 | Clay U1L5                               | Ian Dunshee              | 10/23/2022 | NIKON D3400 |
| DSC_0640 | Clay U1L6                               | Ian Dunshee              | 10/23/2022 | NIKON D3400 |
| DSC_0641 | Clay U1L7                               | Ian Dunshee              | 10/23/2022 | NIKON D3400 |
| DSC_0642 | Clay U1L8                               | Ian Dunshee              | 10/23/2022 | NIKON D3400 |

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| DSC_0643 | Clay U1L9   | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0644 | Poss. Con., undecipherable French tag                       | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0645 | Poss. Con., undecipherable French tag                       | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0646 | Poss. Con., undecipherable French tag                       | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0647 | Burnt wood, 'Unit 2 NE de Unit 2 Zome de lost'              | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0648 | Poss. Con., 'Survey 3 A 78 B 153 D 170' (unreliable trilat) | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0649 | Poss. Con., 'Survey 3 A 78 B 153 D 170' (unreliable trilat) | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0650 | Metal, 'Survey 3 A 78 B 153 D 170' (unreliable trilat)      | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0651 | Metal, 'Survey 3 A 78 B 153 D 170' (unreliable trilat)      | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0652 | Sheathing, 'Survey 3 A 78 B 153 D 170' (unreliable trilat)  | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0653 | Sheathing, 'Survey 3 A 78 B 153 D 170' (unreliable trilat)  | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0654 | Poss. Con., 'Survey 3 A 78 B 153 D 170' (unreliable trilat) | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0655 | Poss. Con., 'Survey 3 A 78 B 153 D 170' (unreliable trilat) | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0656 | Poss. Con., 'Survey 3 A 78 B 153 D 170' (unreliable trilat) | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0657 | Poss. Con., 'Survey 3 A 78 B 153 D 170' (unreliable trilat) | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0658 | Poss. Con., 'Survey 3 A 78 B 153 D 170' (unreliable trilat) | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0659 | Poss. Con., 'Survey 3 A 78 B 153 D 170' (unreliable trilat) | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0660 | Poss. Con., 'Survey 3 A 78 B 153 D 170' (unreliable trilat) | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0661 | Poss. Con., 'Survey 3 A 78 B 153 D 170' (unreliable trilat) | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0662 | Poss. Con., 'Survey 3 A 78 B 153 D 170' (unreliable trilat) | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0663 | Poss. Con., 'Survey 3 A 78 B 153 D 170' (unreliable trilat) | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0664 | Poss. Con., 'Survey 3 A 78 B 153 D 170' (unreliable trilat) | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0665 | Porcelain, U2 Baseline 23M                                  | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0666 | Porcelain, U2 Baseline 23M                                  | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0667 | Porcelain, U2 Baseline 23M                                  | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0668 | Porcelain, U2 Baseline 23M                                  | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0669 | Porcelain, U2 Baseline 23M                                  | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0670 | Porcelain, U2 Baseline 23M                                  | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0671 | Square fastener U1 L2 B202 C103 D106                        | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0672 | Square fastener U1 L2 B202 C103 D106                        | Ian Dunshee | 10/23/2022 | NIKON D3400 |
| DSC_0673 | Wood U1 L1  | Ian Dunshee | 10/23/2022 | NIKON D3400 |

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| DSC_0674 | Wood U1 L1                             | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0675 | Rodent bone, U1, undecipherable French | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0676 | Rodent bone, U1, undecipherable French | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0677 | Rodent bone, U1, undecipherable French | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0678 | Rodent bone, U1, undecipherable French | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0679 | Ceramic, U1, undecipherable French     | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0680 | Ceramic, U1, undecipherable French     | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0681 | Rodent bone, U1, undecipherable French | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0682 | Rodent bone, U1, undecipherable French | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0683 | Glass, U3, undecipherable French       | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0684 | Glass, U3, undecipherable French       | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0685 | Glass, U3, undecipherable French       | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0686 | Metal, U3, undecipherable French       | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0687 | Metal, U3, undecipherable French       | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0688 | Metal, U3, undecipherable French       | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0689 | Poss. Con., U3, undecipherable French  | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0690 | Poss. Con., U3, undecipherable French  | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0691 | Poss. Con., U3, undecipherable French  | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0692 | Photo of French tag U3                 | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0693 | Photo of French tag U3                 | Ian Dunshee    | 10/23/2022 | NIKON D3400 |
| DSC_0694 | Photo of cow hip bone                  | Nicholas Baker | 10/24/2022 | NIKON D3400 |
| DSC_0695 | Photo of cow hip bone                  | Nicholas Baker | 10/24/2022 | NIKON D3400 |
| DSC_0696 | Photo of cow hip bone                  | Nicholas Baker | 10/24/2022 | NIKON D3400 |
| DSC_0697 | Photo of cow hip bone                  | Nicholas Baker | 10/24/2022 | NIKON D3400 |
| DSC_0698 | Photo of UID Metal                     | Nicholas Baker | 10/24/2022 | NIKON D3400 |
| DSC_0699 | Photo of UID Metal                     | Nicholas Baker | 10/24/2022 | NIKON D3400 |
| DSC_0700 | Photo of UID Metal                     | Nicholas Baker | 10/24/2022 | NIKON D3400 |
| DSC_0701 | Photo of UID Metal                     | Nicholas Baker | 10/24/2022 | NIKON D3400 |
| DSC_0702 | Photo of gun flint                     | Nicholas Baker | 10/24/2022 | NIKON D3400 |
| DSC_0703 | Photo of gun flint                     | Nicholas Baker | 10/24/2022 | NIKON D3400 |
| DSC_0704 | Photo of gun flint                     | Nicholas Baker | 10/24/2022 | NIKON D3400 |

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| DSC_0705  | Photo of gun flint                                 | Nicholas Baker                                | 10/24/2022 | NIKON D3400 |
| DSC_0706  | Photo of pipe stem                                 | Nicholas Baker                                | 10/24/2022 | NIKON D3400 |
| DSC_0709  | Photo of pipe stem                                 | Nicholas Baker                                | 10/24/2022 | NIKON D3400 |
| DSC_0709  | Photo of pipe stem                                 | Nicholas Baker                                | 10/24/2022 | NIKON D3400 |
| DSC_0710  | Photo of lead fishing weight                       | Nicholas Baker                                | 10/24/2022 | NIKON D3400 |
| DSC_0711  | Photo of lead fishing weight                       | Nicholas Baker                                | 10/24/2022 | NIKON D3400 |
| DSC_0712  | Photo of lead fishing weight                       | Nicholas Baker                                | 10/24/2022 | NIKON D3400 |
| DSC_0713  | Photo of lead fishing weight                       | Nicholas Baker                                | 10/24/2022 | NIKON D3400 |
| GH_010321 | Video of Unit 3 (0:30)                             | Jeremy Borrelli                               | 10/24/2022 | GoPro       |
| GH_010322 | Video of Unit 3 (0:23 )                            | Jeremy Borrelli                               | 10/24/2022 | GoPro       |
| GH_010323 | Video of Unit 3 ft. Ray (0:33)                     | Jeremy Borrelli                               | 10/24/2022 | GoPro       |
| GH_010324 | Video of Unit 3 (1:01)                             | Jeremy Borrelli                               | 10/24/2022 | GoPro       |
| GH_010325 | Video of Unit 3; focused on sheathing (0:23)       | Jeremy Borrelli                               | 10/24/2022 | GoPro       |
| GH_010326 | Video of Unit 3; focused on sheathing (0:44)       | Jeremy Borrelli                               | 10/24/2022 | GoPro       |
| GH_010331 | Video of Unit 3; focused on sheathing (0:39)       | Jeremy Borrelli                               | 10/24/2022 | GoPro       |
| GH_010332 | Video of Unit 3; sheathing and artifacts (0:21)    | Jeremy Borrelli                               | 10/24/2022 | GoPro       |
| GH_010333 | Video of Unit 3; bagging artifact/sheathing (0:56) | Jeremy Borrelli                               | 10/24/2022 | GoPro       |
| GH_010334 | Video of Logan (0:09)                              | Logan Willis                                  | 10/24/2022 | GoPro       |
| GH_010335 | Video of Unit 3; lead sheathing (0:30)             | Logan Willis                                  | 10/24/2022 | GoPro       |
| GH_010336 | Video of Unit 3; lead sheathing (0:17)             | Logan Willis                                  | 10/24/2022 | GoPro       |
| GH_010339 | Video of Unit 3; Logan/Jeremy Dredging (2:21)      | Jeremy Borrelli                               | 10/24/2022 | GoPro       |
| GH_010340 | Video of Unit 3 (2:18)                             | Logan Willis                                  | 10/24/2022 | GoPro       |
| GH_010343 | Video of Unit 3; sternpost assemblage (0:43)       | Logan Willis, Raymond Phipps, Jeremy Borrelli | 10/24/2022 | GoPro       |
| GH_010347 | Video of Unit 3 w/ photo meter                     | Logan Willis, Raymond Phipps, Jeremy Borrelli | 10/24/2022 | GoPro       |
| GOPR0216  | Katelyn dredging                                   | Katelyn Rollins, Ian Dunshee, Dr. McKinnon    | 10/24/2022 | GoPro       |
| GOPR0217  | Katelyn dredging                                   | Katelyn Rollins, Ian Dunshee, Dr. McKinnon    | 10/24/2022 | GoPro       |
| GOPR0218  | Katelyn dredging                                   | Katelyn Rollins, Ian Dunshee, Dr. McKinnon    | 10/24/2022 | GoPro       |

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| GOPR0219 | Unit 1 scale (keel) | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon | 10/24/2022 | GoPro |
| GOPR0220 | Unit 1 scale (keel) | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon | 10/24/2022 | GoPro |
| GOPR0222 | Unit 1 scale (keel) | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon | 10/24/2022 | GoPro |
| GOPR0223 | Unit 1 scale (keel) | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon | 10/24/2022 | GoPro |
| GOPR0224 | Unit 1 scale (keel) | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon | 10/24/2022 | GoPro |
| GOPR0225 | Unit 1 scale (keel) | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon | 10/24/2022 | GoPro |
| GOPR0226 | Unit 1 scale (keel) | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon | 10/24/2022 | GoPro |
| GOPR0227 | Unit 1 scale (keel) | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon | 10/24/2022 | GoPro |
| GOPR0228 | Unit 1 scale (keel) | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon | 10/24/2022 | GoPro |
| GOPR0229 | Unit 1 scale (keel) | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon | 10/24/2022 | GoPro |
| GOPR0230 | Unit 1 scale        | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon | 10/24/2022 | GoPro |
| GOPR0231 | Unit 1              | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon | 10/24/2022 | GoPro |
| GOPR0232 | Unit 1 corner scale | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon | 10/24/2022 | GoPro |
| GOPR0233 | Unit 1 corner scale | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon | 10/24/2022 | GoPro |
| GOPR0234 | Unit 1 corner scale | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon | 10/24/2022 | GoPro |
| GOPR0235 | Unit 1 corner scale | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon | 10/24/2022 | GoPro |
| GOPR0236 | Unit 1 corner scale | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon | 10/24/2022 | GoPro |
| GOPR0237 | Unit 1 scale        | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon | 10/24/2022 | GoPro |
| GOPR0238 | Unit 1 scale        | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon | 10/24/2022 | GoPro |

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| GOPR0239 | Ian mapping                              | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon    | 10/24/2022 | GoPro |
| GOPR0240 | Ian mapping                              | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon    | 10/24/2022 | GoPro |
| GOPR0241 | Ian mapping                              | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon    | 10/24/2022 | GoPro |
| GOPR0242 | Ian mapping                              | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon    | 10/24/2022 | GoPro |
| GOPR0243 | Katelyn dredging                         | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon    | 10/24/2022 | GoPro |
| GOPR0244 | Katelyn dredging                         | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon    | 10/24/2022 | GoPro |
| GOPR0245 | Katelyn dredging                         | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon    | 10/24/2022 | GoPro |
| GOPR0246 | Katelyn dredging                         | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon    | 10/24/2022 | GoPro |
| GOPR0247 | Katelyn dredging                         | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon    | 10/24/2022 | GoPro |
| GOPR0248 | Katelyn dredging                         | Katelyn Rollins, Ian Dunshee,<br>Dr. McKinnon    | 10/24/2022 | GoPro |
| GOPR0249 | Sheathing Unit 3                         | Logan Willis, Raymond<br>Phipps, Jeremy Borrelli | 10/24/2022 | GoPro |
| GOPR0329 | Jeremy in Unit 3                         | Logan Willis, Raymond<br>Phipps, Jeremy Borrelli | 10/24/2022 | GoPro |
| GOPR0337 | Unit 3; inner/outer sternpost            | Logan Willis, Raymond<br>Phipps, Jeremy Borrelli | 10/24/2022 | GoPro |
| GOPR0338 | Unit 3; inner/outer sternpost            | Logan Willis, Raymond<br>Phipps, Jeremy Borrelli | 10/24/2022 | GoPro |
| GOPR0341 | Unit 3; inner/outer sternpost            | Logan Willis, Raymond<br>Phipps, Jeremy Borrelli | 10/24/2022 | GoPro |
| GOPR0342 | Unit 3; inner/outer sternpost            | Logan Willis, Raymond<br>Phipps, Jeremy Borrelli | 10/24/2022 | GoPro |
| GOPR0345 | Unit 3; inner/outer sternpost photoscale | Logan Willis, Raymond<br>Phipps, Jeremy Borrelli | 10/24/2022 | GoPro |
| GOPR0346 | Unit 3; inner/outer sternpost photoscale | Logan Willis, Raymond<br>Phipps, Jeremy Borrelli | 10/24/2022 | GoPro |
| GOPR0348 | Unit 3; gudgeon                          | Logan Willis, Raymond<br>Phipps, Jeremy Borrelli | 10/24/2022 | GoPro |



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| GOPR0349 | Unit 3; gudgeon                                 | Logan Willis, Raymond Phipps, Jeremy Borrelli | 10/24/2022 | GoPro       |
| GOPR0350 | Unit 3; gudgeon                                 | Logan Willis, Raymond Phipps, Jeremy Borrelli | 10/24/2022 | GoPro       |
| GOPR0351 | Unit 3; gudgeon                                 | Logan Willis, Raymond Phipps, Jeremy Borrelli | 10/24/2022 | GoPro       |
| GX010212 | Frank organizing                                |   | 10/24/2022 | GoPro       |
| GX010213 | Video of Unit 1 (2:52)                          | Dr. Harris, Katelyn, Ray                      | 10/24/2022 | GoPro       |
| GX010214 | Video of Unit 1 (0:47)                          | Dr. Harris, Katelyn, Ray                      | 10/24/2022 | GoPro       |
| GX010215 | Video of Unit 1 (0:20)                          | Dr. Harris, Katelyn, Ray                      | 10/24/2022 | GoPro       |
| GX010221 | Video of Unit 1 (0:04)                          | Dr. Harris, Katelyn, Ray                      | 10/24/2022 | GoPro       |
| GX010249 | Video of Unit 1 Keel (0:40)                     | Dr. Harris, Katelyn, Ray                      | 10/24/2022 | GoPro       |
| PA240094 | Ray, Katelyn, Ryan topside                      | Jeremy Borrelli                               | 10/24/2022 |             |
| PA240095 | Ryan and Frank topside                          | Jeremy Borrelli                               | 10/24/2022 |             |
| PA240096 | Lead sheathing                                  | Logan Willis, Raymond Phipps, Jeremy Borrelli | 10/24/2022 | GoPro       |
| PA240097 | Unit 3 datum d                                  | Logan Willis, Raymond Phipps, Jeremy Borrelli | 10/24/2022 | GoPro       |
| PA240099 | Unit 3 datum d                                  | Jeremy Borrelli                               | 10/24/2022 | GoPro       |
| PA240101 | Lead sheathing                                  | Jeremy Borrelli                               | 10/24/2022 | GoPro       |
| PA240102 | Sternpost assembly                              | Jeremy Borrelli                               | 10/24/2022 | GoPro       |
| DSC_0621 | Musketball                                      | Ian Dunshee, Katelyn Rollins                  | 10/26/2022 | NIKON D3400 |
| DSC_0625 | Feather Edged Creanware; 1 Rim and 1 Base       | Ian Dunshee, Katelyn Rollins                  | 10/26/2022 | NIKON D3400 |
| DSC_0626 | Feather Edged Creanware; 1 Rim and 1 Base       | Ian Dunshee, Katelyn Rollins                  | 10/26/2022 | NIKON D3400 |
| DSC_0627 | Feather Edged Creanware; 1 Rim and 1 Base       | Ian Dunshee, Katelyn Rollins                  | 10/26/2022 | NIKON D3400 |
| DSC_0630 | Mammal Bone – Rib                               | Ian Dunshee, Katelyn Rollins                  | 10/26/2022 | NIKON D3400 |
| DSC_0631 | Mammal Bone – Rib                               | Ian Dunshee, Katelyn Rollins                  | 10/26/2022 | NIKON D3400 |
| DSC_0632 | Mammal Bone – Rib                               | Ian Dunshee, Katelyn Rollins                  | 10/26/2022 | NIKON D3400 |
| DSC_0633 | Chert (Possibly Gun Flint) (Brown)              | Ian Dunshee, Katelyn Rollins                  | 10/26/2022 | NIKON D3400 |
| DSC_0634 | Chert (Possibly Gun Flint) (Brown)              | Ian Dunshee, Katelyn Rollins                  | 10/26/2022 | NIKON D3400 |
| DSC_0635 | Chert (Possibly Gun Flint) (Brown)              | Ian Dunshee, Katelyn Rollins                  | 10/26/2022 | NIKON D3400 |
| DSC_0637 | Glass Fragments (1 Modern Green; 1 Olive Green) | Ian Dunshee, Katelyn Rollins                  | 10/26/2022 | NIKON D3400 |
| DSC_0638 | Glass Fragments (1 Modern Green; 1 Olive Green) | Ian Dunshee, Katelyn Rollins                  | 10/26/2022 | NIKON D3400 |

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| DSC_0639 | Glass Fragments (1 Modern Green; 1 Olive Green) | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0640 | Bone-Vertebre                                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0641 | Bone-Vertebre                                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0642 | Bone-Vertebre                                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0643 | Bone-Vertebre                                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0644 | Bone-Vertebre                                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0645 | Bone-Vertebre                                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0646 | Bone-Vertebre                                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0647 | Bone-Vertebre                                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0648 | Bone-Vertebre                                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0649 | Bone-Vertebre                                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0650 | Bone-Vertebre                                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0651 | Bone-Vertebre                                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0652 | Bone-Vertebre                                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0653 | Bone-Vertebre                                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0654 | Lead Along Keel                                 | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0655 | Lead Along Keel                                 | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0656 | Lead Along Keel                                 | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0657 | Lead Along Keel                                 | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0658 | Lead Along Keel                                 | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0659 | Lead Along Keel                                 | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0660 | Lead Along Keel                                 | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0661 | Lead Along Keel                                 | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0662 | Lead Along Keel                                 | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0663 | Lead Along Keel                                 | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0664 | Lead Along Keel                                 | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0665 | Lead Along Keel                                 | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0666 | Mammal Bone Fragment                            | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0667 | Mammal Bone Fragment                            | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0668 | Mammal Bone Fragment                            | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0669 | Mammal Bone Fragment                            | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |

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| DSC_0670 | Mammal Bone Fragments-3              | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0671 | Mammal Bone Fragments-3              | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0672 | Lead Sheathing                       | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0673 | Lead Sheathing                       | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0674 | Lead Sheathing                       | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0675 | Lead Sheathing                       | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0676 | Lead Sheathing                       | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0677 | Lead Sheathing                       | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0678 | Lead Fishing Weights                 | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0680 | Lead Fishing Weights                 | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0681 | Lead Fishing Weights                 | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0682 | Ceramic- Porcelain Base              | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0683 | Ceramic- Porcelain Base              | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0684 | Ceramic- Porcelain Base              | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0685 | Ceramic- (Possibly Delft) Curved Rim | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0686 | Ceramic- (Possibly Delft) Curved Rim | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0687 | Ceramic- (Possibly Delft) Curved Rim | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0688 | Bone Fragments (2)                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0689 | Bone Fragments (2)                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0690 | Bone Fragments (2)                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0691 | Treenails                            | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0692 | Treenails                            | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0693 | Treenails                            | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0694 | Treenails                            | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0695 | Treenails                            | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0696 | Treenails                            | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0697 | Curved Glass Shard - Olive Green     | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0698 | Curved Glass Shard - Olive Green     | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0699 | Curved Glass Shard - Olive Green     | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0700 | Lead                                 | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0701 | Lead                                 | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |

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| DSC_0702 | Lead                                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0703 | Bone Fragment                          | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0704 | Bone Fragment                          | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0705 | Bone Fragment                          | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0706 | Bone Fragment                          | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0713 | Concreted fastener                     | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0714 | Concreted fastener                     | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0715 | Mammal Bone                            | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0716 | Mammal Bone                            | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0717 | Mammal Bone                            | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0718 | Mammal Bone                            | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0719 | Mammal Bone                            | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0720 | Mammal Bone                            | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0721 | Mammal Bone (2 Frags)                  | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0722 | Mammal Bone (2 Frags)                  | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0723 | Mammal Bone (2 Frags)                  | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0724 | Leather Piece                          | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0725 | Leather Piece                          | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0726 | Leather Piece                          | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0727 | Mammal Bone (2 Frags)                  | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0728 | Mammal Bone (2 Frags)                  | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0729 | Brown Salt Glazed Stoneware – Body     | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0730 | Brown Salt Glazed Stoneware – Body     | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0731 | Brown Salt Glazed Stoneware – Body     | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0732 | White Ceramic – Body                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0733 | White Ceramic – Body                   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0734 | Ceramic Sherd, Body, Possibly Biot Jar | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0735 | Ceramic Sherd, Body, Possibly Biot Jar | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0736 | Mammal Bone                            | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0737 | Mammal Bone                            | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0738 | Tile Sherd/Brick Frag?                 | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |

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| DSC_0739 | Tile Sherd/Brick Frag? | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0740 | Tile Sherd/Brick Frag? | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0741 | Decorative Pipe Bowl   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0742 | Decorative Pipe Bowl   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0743 | Decorative Pipe Bowl   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0744 | Decorative Pipe Bowl   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0745 | Decorative Pipe Bowl   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0746 | Decorative Pipe Bowl   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0747 | Decorative Pipe Bowl   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0748 | Decorative Pipe Bowl   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0749 | Decorative Pipe Bowl   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0750 | Decorative Pipe Bowl   | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0751 | Concreted Trunnel      | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0752 | Concreted Trunnel      | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0753 | Concreted Trunnel      | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0754 | Concreted Trunnel      | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0755 | Iron Fastener Top?     | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0756 | Iron Fastener Top?     | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0757 | Iron Fastener Top?     | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0758 | Wine Bottle Base       | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0759 | Wine Bottle Base       | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0760 | Wine Bottle Base       | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0761 | Wine Bottle Base       | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0762 | Copper Tube (Modern?)  | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0763 | Copper Tube (Modern?)  | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0764 | Copper Tube (Modern?)  | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0765 | Copper Tube (Modern?)  | Ian Dunshee, Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0766 | Fory Berkeley          | Katelyn Rollins              | 10/26/2022 | NIKON D3400 |
| DSC_0767 | Fort Charlotte         | Katelyn Rollins              | 10/26/2022 | NIKON D3400 |
| DSC_0768 | Fort Charlotte         | Katelyn Rollins              | 10/26/2022 | NIKON D3400 |
| DSC_0769 | Fort Charlotte         | Katelyn Rollins              | 10/26/2022 | NIKON D3400 |

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| DSC_0770 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0771 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0772 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0773 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0774 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0775 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0776 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0777 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0778 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0779 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0780 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0781 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0782 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0783 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0784 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0785 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0786 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0787 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0788 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0789 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0790 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| DSC_0791 | Fort Charlotte                      | Katelyn Rollins | 10/26/2022 | NIKON D3400 |
| IMG0255  | Unit 1 Wood                         | Raymond Phipps  | 10/26/2022 | iPad Pro 12 |
| IMG0257  | Unit 1 Concretion                   | Raymond Phipps  | 10/26/2022 | iPad Pro 12 |
| IMG0258  | Unit 1 Wood                         | Raymond Phipps  | 10/26/2022 | iPad Pro 12 |
| IMG0259  | Unit 1 Lead                         | Raymond Phipps  | 10/26/2022 | iPad Pro 12 |
| IMG0260  | Unit 1 Iron                         | Raymond Phipps  | 10/26/2022 | iPad Pro 12 |
| IMG0261  | Unit 1 Concretion                   | Raymond Phipps  | 10/26/2022 | iPad Pro 12 |
| IMG0262  | Unit 1 Charcoal                     | Raymond Phipps  | 10/26/2022 | iPad Pro 12 |
| IMG0263  | Unit 1 Lead Sheathing               | Raymond Phipps  | 10/26/2022 | iPad Pro 12 |
| IMG0264  | Unit 1 Iron/Concretion Fastner Void | Raymond Phipps  | 10/26/2022 | iPad Pro 12 |

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| IMG0265  | Unit 1 Wood                            | Raymond Phipps | 10/26/2022 | iPad Pro 12 |
| IMG0266  | Unit 1 Concretion                      | Raymond Phipps | 10/26/2022 | iPad Pro 12 |
| IMG0267  | Unit 1 Charcoal                        | Raymond Phipps | 10/26/2022 | iPad Pro 12 |
| IMG0268  | Unit 1 Wood Concretion                 | Raymond Phipps | 10/26/2022 | iPad Pro 12 |
| IMG0269  | Unit 2 Wood                            | Raymond Phipps | 10/26/2022 | iPad Pro 12 |
| IMG0270  | Unit 2 Charcoal                        | Raymond Phipps | 10/26/2022 | iPad Pro 12 |
| IMG0271  | Unit 2 Concretion                      | Raymond Phipps | 10/26/2022 | iPad Pro 12 |
| IMG0272  | Unit 2 Wood                            | Raymond Phipps | 10/26/2022 | iPad Pro 12 |
| IMG0273  | Unit 2 Concretion                      | Raymond Phipps | 10/26/2022 | iPad Pro 12 |
| IMG0274  | Unit 2 Copper                          | Raymond Phipps | 10/26/2022 | iPad Pro 12 |
| IMG0275  | Unit 3 Wood                            | Raymond Phipps | 10/26/2022 | iPad Pro 12 |
| IMG0276  | Unit 3 Charcoal                        | Raymond Phipps | 10/26/2022 | iPad Pro 12 |
| GH010352 | Video of Olivia and DJ Dredging Unit 1 | Jeremy         | 10/27/2022 | GoPro       |
| GH010353 | Video of Olivia and DJ Dredging Unit 2 | Jeremy         | 10/27/2022 | GoPro       |
| GH010362 | Unit 2                                 | Jeremy         | 10/27/2022 | GoPro       |
| GH010386 | Video of Dive Boat                     | Madie Elsner   | 10/27/2022 | GoPro       |
| GH010387 | Video of Dive Boat                     | Madie Elsner   | 10/27/2022 | GoPro       |
| GH010388 | Video of Dive Boat                     | Madie Elsner   | 10/27/2022 | GoPro       |
| GOPR0354 | Picture of Olivia and DJ Dredging      | Jeremy         | 10/27/2022 | GoPro       |
| GOPR0355 | Picture of Olivia and DJ Dredging      | Jeremy         | 10/27/2022 | GoPro       |
| GOPR0356 | Picture of Olivia and DJ Dredging      | Jeremy         | 10/27/2022 | GoPro       |
| GOPR0357 | Picture of Olivia and DJ Dredging      | Jeremy         | 10/27/2022 | GoPro       |
| GOPR0358 | Picture of Olivia and DJ Dredging      | Jeremy         | 10/27/2022 | GoPro       |
| GOPR0359 | Picture of Olivia and DJ Dredging      | Jeremy         | 10/27/2022 | GoPro       |
| GOPR0360 | Picture of Olivia and DJ Dredging      | Jeremy         | 10/27/2022 | GoPro       |
| GOPR0361 | Picture of spam can                    | Jeremy         | 10/27/2022 | GoPro       |
| GOPR0363 | Unit 2                                 | Dr. Harris     | 10/27/2022 | GoPro       |
| GOPR0364 | Unit 2                                 | Dr. Harris     | 10/27/2022 | GoPro       |
| GOPR0365 | Maddie Dredging Unit 2                 | Dr. Harris     | 10/27/2022 | GoPro       |
| GOPR0366 | Maddie Dredging Unit 3                 | Dr. Harris     | 10/27/2022 | GoPro       |
| GOPR0367 | Maddie Dredging Unit 4                 | Dr. Harris     | 10/27/2022 | GoPro       |

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|----------|---------------------------------------|-------------------|------------|-------|
| GOPR0368 | Maddie Dredging Unit 5                | Dr. Harris        | 10/27/2022 | GoPro |
| GOPR0369 | Maddie Dredging Unit 6                | Dr. Harris        | 10/27/2022 | GoPro |
| GOPR0370 | Maddie Dredging Unit 7                | Dr. Harris        | 10/27/2022 | GoPro |
| GOPR0371 | Maddie Dredging Unit 8                | Dr. Harris        | 10/27/2022 | GoPro |
| GOPR0372 | Maddie Dredging Unit 9                | Dr. Harris        | 10/27/2022 | GoPro |
| GOPR0373 | Maddie Dredging Unit 10               | Dr. Harris        | 10/27/2022 | GoPro |
| GOPR0374 | Maddie Dredging Unit 11               | Dr. Harris        | 10/27/2022 | GoPro |
| GOPR0375 | Maddie Dredging Unit 12               | Dr. Harris        | 10/27/2022 | GoPro |
| GOPR0376 | Maddie Dredging Unit 13               | Dr. Harris        | 10/27/2022 | GoPro |
| GOPR0377 | Copper Sheathing                      | Dr. Harris        | 10/27/2022 | GoPro |
| GOPR0378 | Copper Sheathing                      | Dr. Harris        | 10/27/2022 | GoPro |
| GOPR0379 | Copper Sheathing                      | Dr. Harris        | 10/27/2022 | GoPro |
| GOPR0380 | Unit 1                                | Dr. Harris        | 10/27/2022 | GoPro |
| GOPR0381 | Unit 1                                | Dr. Harris        | 10/27/2022 | GoPro |
| GOPR0382 | Unit 1                                | Dr. Harris        | 10/27/2022 | GoPro |
| GOPR0383 | Unit 1                                | Dr. Harris        | 10/27/2022 | GoPro |
| GOPR0384 | Unit 1                                | Dr. Harris        | 10/27/2022 | GoPro |
| GOPR0385 | Unit 1                                | Dr. Harris        | 10/27/2022 | GoPro |
| GOPR0387 | Olivia and DJ Mapping Unit 1          | Jeremy Borrelli   | 10/27/2022 | GoPro |
| GOPR0389 | Picture of Dive Boat                  | Madie Elsner      | 10/27/2022 | GoPro |
| GOPR0390 | Ryan in Unit 3                        | Jeremy Borrelli   | 10/27/2022 | GoPro |
| GOPR0391 | Ryan in Unit 3                        | Jeremy Borrelli   | 10/27/2022 | GoPro |
| GOPR0392 | Ryan in Unit 3                        | Jeremy Borrelli   | 10/27/2022 | GoPro |
| GOPR0395 | Stem Assembly                         | Olivia Livingston | 10/27/2022 | GoPro |
| GOPR0396 | Stem Assembly                         | Olivia Livingston | 10/27/2022 | GoPro |
| GOPR0397 | "b" corner of Unit 1                  | Olivia Livingston | 10/27/2022 | GoPro |
| GOPR0398 | "b" corner of Unit 1                  | Olivia Livingston | 10/27/2022 | GoPro |
| GOPR0402 | DJ in Unit 1                          | Olivia Livingston | 10/27/2022 | GoPro |
| GOPR0403 | DJ in Unit 1                          | Olivia Livingston | 10/27/2022 | GoPro |
| GX010358 | Video of Olivia and DJ Mapping Unit 1 | Jeremy Borrelli   | 10/27/2022 | GoPro |
| GX010372 | Video of Unit 2 with Olivia and DJ    | Jeremy Borrelli   | 10/27/2022 | GoPro |



|          |  |                 |            |       |
|----------|--|-----------------|------------|-------|
| GX010374 | Video of Unit 2 with Olivia                      | Jeremy Borrelli | 10/27/2022 | GoPro |
| GX010377 | Video of Olivia and DJ Mapping Unit 2            | Jeremy Borrelli | 10/27/2022 | GoPro |
| GX010393 | Video of Dredging Unit 1 to Get Beneath the Keel | Jeremy Borrelli | 10/27/2022 | GoPro |
| GX010399 | Video of Dredging Unit 1 to Get Beneath the Keel | Jeremy Borrelli | 10/27/2022 | GoPro |
| GX010404 | Video of Olivia Dredging with DJ                 | Jeremy Borrelli | 10/27/2022 | GoPro |
| GOPRO421 | Anchor   | Katelyn Rollins | 10/28/2022 | Gopro |
| GOPRO422 | Anchor   | katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO423 | Anchor   | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO424 | Anchor   | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO425 | Anchor   | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO426 | Bottle Finish with scale                         | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO427 | Bottle Finish with scale                         | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO428 | Modern Anchor                                    | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO429 | Modern Anchor                                    | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO430 | Modern Anchor                                    | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO431 | Modern Anchor                                    | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO432 | Timber   | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO433 | Timber   | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO434 | Chains   | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO435 | Chains   | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO436 | Chains   | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO437 | Chains   | katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO438 | Metal Drum                                       | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO439 | Metal Sheathing                                  | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO440 | Maddie Snorkeling                                | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO441 | Maddie Snorkeling                                | katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO442 | Maddie Snorkeling                                | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO443 | Maddie Snorkeling                                | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO444 | Timber   | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO445 | Timber   | Katelyn Rollins | 10/28/2022 | GoPro |
| GOPRO446 | Timber   | Katelyn Rollins | 10/28/2022 | GoPro |

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|----------|-----------------------|-----------------|-------------------|-------|
| GOPRO447 | Fish Trap             | Katelyn Rollins | 10/28/2022        | GoPro |
| GOPRO448 | Fish Trap             | Katelyn Rollins | 10/28/2022        | GoPro |
| GOPRO449 | Ceramic               | Katelyn Rollins | <b>10/28/2022</b> | GoPro |
| GOPRO450 | Ceramic               | Katelyn Rollins | <b>10/28/2022</b> | GoPro |
| GOPRO451 | Ceramic               | Katelyn Rollins | <b>10/28/2022</b> | GoPro |
| GOPRO452 | Dr. Harris Snorkeling | Katelyn Rollins | <b>10/28/2022</b> | GoPro |
| GOPRO453 | Glass                 | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO454 | Ceramic               | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO455 | Ceramic               | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO456 | Sea Grass             | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO457 | Cuttle Fish           | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO458 | Blue Ceramic          | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO459 | Blue Ceramic          | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO460 | Ceramic (2 pieces)    | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO461 | Ceramic (2 pieces)    | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO462 | Ceramic               | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO463 | Ceramic               | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO464 | Chain                 | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO465 | Chain                 | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO466 | Chain                 | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO467 | Metal Rod             | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO468 | Metal Rod             | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO469 | Metal Rod             | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO470 | Mooring Block         | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO471 | Mooring Block         | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO472 | Mooring Block         | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO473 | Mooring Block         | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO474 | Mooring Block         | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO475 | Metal Rod             | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO476 | Mooring Block         | Katelyn Rollins | <b>10/28/2022</b> | Gopro |
| GOPRO477 | Mooring Block         | Katelyn Rollins | <b>10/28/2022</b> | Gopro |

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| GOPRO478 | Mooring Block  | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO479 | Mooring Block  | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO480 | Mooring Block  | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO481 | Mooring Block  | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO482 | Mooring Block  | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO483 | Block from Fort Berkeley in the water                        | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO484 | Nick Snorkeling  | DJ Schafer      | <b>10/28/2022</b> | Gopro       |
| GOPRO485 | Nick Snorkeling  | DJ Schafer      | <b>10/28/2022</b> | Gopro       |
| GOPRO486 | Mooring Pin  | DJ Schafer      | <b>10/28/2022</b> | Gopro       |
| GOPRO487 | Mooring Pin  | DJ Schafer      | <b>10/28/2022</b> | Gopro       |
| GOPRO488 | Mooring Pin with scale                                       | DJ Schafer      | <b>10/28/2022</b> | Gopro       |
| GOPRO489 | Mooring Pin with scale                                       | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO490 | Mooring Pin with scale                                       | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO491 | Mooring Pin with scale                                       | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO492 | Mooring Pin with scale                                       | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO493 | Mooring Pin with scale                                       | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO494 | Mooring Pin with scale                                       | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO495 | Mooring Pin with scale                                       | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO496 | Maddie and Katelyn Snorkeling Fort Berkeley                  | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO497 | Fort Berkeley  | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO498 | Fort Berkeley  | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO499 | Fort Berkeley  | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO500 | Katelyn Living Her Best Life                                 | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO501 | Tip of Fort Berkeley   | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO502 | Edge of Fort Berkeley  | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| GOPRO503 | Edge of Fort Berkeley  | Katelyn Rollins | <b>10/28/2022</b> | Gopro       |
| DSC_1124 | View of Nelson's Dockyard looking north from Fort Charlotte  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1125 | Olivia overlooking English Harbour                           | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1126 | Raymond surveying the ocean                                  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1127 | Dayan and Ian climbing over rocks at the Pillars of Hercules | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1128 | The coastline to the east of Fort Charlotte                  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |

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| DSC_1129 | Hiking trail between Fort Charlotte and the Blockhouse  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1130 | The coastline to the east of Fort Charlotte   | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1131 | Survey team of Dayan, Ian, Olivia, Logan, Raymond on the hiking trail                                     | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1132 | Broken rocks showing erosion of the cliff edge  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1133 | Mermaid Gardens tidal pool  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1134 | Dayan relaxing at Mermaid Gardens   | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1135 | Dog overlooks survey team rinsing off at Mermaid Gardens  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1136 | Dog overlooks survey team rinsing off at Mermaid Gardens  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1137 | Logan floating at Mermaid Garden  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1138 | Survey team of Dayan, Ian, Olivia, Logan, Raymond on the hiking trail                                     | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1139 | Dayan surveys the remaining trail   | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1140 | Pipe stem found along hiking path to Shirley Heights  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1141 | Pipe stem found along hiking path to Shirley Heights  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1142 | View of the Blockhouse ruins from the hiking trail  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1143 | Olivia with the Blockhouse in the background  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1144 | Shirley Heights Officer's Quarters, full view   | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1145 | Shirley Heights Officer's Quarters, perspective of ruins  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1146 | Shirley Heights Officer's Quarters, perspective of ruins  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1147 | Shirley Heights Officer's Quarters, perspective of ruins  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1148 | Shirley Heights Officer's Quarters, perspective of ruins  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1149 | Signage of Shirley Heights Lookout  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1150 | View of English Harbour from Shirley Heights  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1151 | View of English Harbour from Shirley Heights  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1152 | View of English Harbour from Shirley Heights  | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1153 | Ruins in the woods between Shirley Heights and the Blockhouse   | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1154 | Ruins in the woods between Shirley Heights and the Blockhouse   | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1155 | Survey team of Dayan, Ian, Olivia, Logan, Raymond working at ruins between Shirley Heights and Blockhouse | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1156 | Survey team of Dayan, Ian, Olivia, Logan, Raymond working at ruins between Shirley Heights and Blockhouse | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1157 | Survey team of Dayan, Ian, Olivia, Logan, Raymond working at ruins between Shirley Heights and Blockhouse | Jeremy Borrelli | <b>10/29/2022</b> | NIKON D3400 |

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| DSC_1158 | Survey team of Dayan, Ian, Olivia, Logan, Raymond working at ruins between Shirley Heights and Blockhouse | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1159 | Raymond measuring ruins   | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1161 | Logan measuring ruins   | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1162 | Ruins in the woods between Shirley Heights and the Blockhouse   | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1163 | Ruins in the woods between Shirley Heights and the Blockhouse   | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1164 | Ruins in the woods between Shirley Heights and the Blockhouse   | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1165 | Survey team walking towards the Blockhouse  | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1166 | Blockhouse ruins  | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1167 | Goats at the Blockhouse   | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1168 | Goats at the Blockhouse   | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1169 | Goats at the Blockhouse   | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1170 | Goats at the Blockhouse   | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1171 | Olivia at the overlook of the Blockhouse  | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1172 | Goats within the Blockhouse   | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1173 | Goats within the Blockhouse   | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1174 | Goats with a broken Blomefield cannon at the Blockhouse   | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1175 | Broken Blomefield cannon at the Blockhouse, full view from muzzle   | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1176 | Broken Blomefield cannon at the Blockhouse, full view from cascabel                                       | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1177 | Broken Blomefield cannon at the Blockhouse, detail of cascabel  | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1178 | Powder Magazine at the Blockhouse, rear perspective   | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1179 | Powder Magazine at the Blockhouse, front perspective  | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1180 | Powder Magazine at the Blockhouse, front perspective  | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1181 | Powder Magazine at the Blockhouse, front perspective  | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1182 | Powder Magazine at the Blockhouse, interior   | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1183 | Powder Magazine at the Blockhouse, water drainage system  | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1184 | View looking west towards Blockhouse ruins  | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1185 | Damage to concrete at the Blockhouse  | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1186 | Erosion of the fortified wall of the Blockhouse   | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1187 | Erosion of the fortified wall of the Blockhouse   | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1188 | UID structure at the Blockhouse, full view perspective  | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |

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| DSC_1189 | UID structure at the Blockhouse, full view perspective             | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1190 | UID structure at the Blockhouse, side perspective                  | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1191 | UID structure at the Blockhouse, side perspective                  | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1192 | UID structure at the Blockhouse, side perspective                  | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1193 | UID structure at the Blockhouse, full view perspective             | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1194 | UID structure at the Blockhouse, full view perspective             | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1195 | UID structure at the Blockhouse, full view perspective             | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1196 | UID structure at the Blockhouse, full view perspective             | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1197 | UID structure at the Blockhouse, full view perspective             | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1198 | UID structure at the Blockhouse, full view perspective             | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1199 | UID structure at the Blockhouse, full view perspective             | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1200 | UID structure at the Blockhouse, full view perspective             | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1201 | UID structure at the Blockhouse, full view perspective             | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1202 | UID structure at the Blockhouse, full view perspective             | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1203 | UID structure at the Blockhouse, full view perspective             | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1204 | UID structure at the Blockhouse, full view perspective             | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1205 | UID structure at the Blockhouse, side perspective                  | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1206 | UID structure at the Blockhouse, side perspective                  | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1207 | UID structure at the Blockhouse, side perspective                  | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1208 | UID structure at the Blockhouse, side perspective                  | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1209 | UID structure at the Blockhouse, entrance detail                   | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1210 | UID structure at the Blockhouse, entrance detail                   | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1211 | Cistern at the Blockhouse, full view perspective                   | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1212 | Cistern at the Blockhouse, decoration detail                       | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1213 | Cistern at top of Jones Valley Trail, full view perspective        | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1214 | Cistern at top of Jones Valley Trail, erosion                      | Olivia Livingston | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1215 | Raymond taking a break at the cistern at top of Jones Valley Trail | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1216 | "Caroline Wieburg" tombstone on Jones Valley Trail                 | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1217 | "Ann Gladwin" tombstone on Jones Valley Trail                      | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1218 | Raymond hiking past 18th century dam on Jones Valley Trail         | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1219 | 18th century dam on Jones Valley Trail                             | Jeremy Borrelli   | <b>10/29/2022</b> | NIKON D3400 |

|          |  |                 |            |             |
|----------|--|-----------------|------------|-------------|
| DSC_1220 | Rock fallen within an 18th century dam on Jones Valley Trail | Jeremy Borrelli | 10/29/2022 | NIKON D3400 |
| DSC_1221 | UID structure near dam on Jones Valley Trail                 | Jeremy Borrelli | 10/29/2022 | NIKON D3400 |
| DSC_1222 | 18th dam on Jones Valley Trail, interior                     | Jeremy Borrelli | 10/29/2022 | NIKON D3400 |
| DSC_1223 | Survey team hiking on Jones Valley Trail                     | Jeremy Borrelli | 10/29/2022 | NIKON D3400 |
| DSC_1224 | Hermit crab on Jones Valley Trail                            | Jeremy Borrelli | 10/29/2022 | NIKON D3400 |
| DSC_1225 | Ceramic, body fragment, Unit 2                               | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1226 | Ceramic, body fragment, Unit 2                               | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1227 | Ceramic, body fragment, Unit 2                               | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1228 | Ceramic, body fragment, Unit 2                               | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1229 | Ceramic, rim sherd, Unit 3                                   | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1230 | Ceramic, rim sherd, Unit 3                                   | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1231 | Lead bilge strainer fragment, Unit 3                         | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1232 | Lead bilge strainer fragment, Unit 3                         | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1233 | Lead shot, Unit 3  | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1234 | Lead shot, Unit 3  | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1235 | Decorated ceramic, plate base sherd fragment, Unit 3         | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1236 | Decorated ceramic, plate base sherd fragment, Unit 3         | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1237 | Decorated ceramic, plate base sherd fragment, Unit 3         | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1238 | Decorated ceramic, plate base sherd fragment, Unit 3         | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1239 | Decorated ceramic, plate base sherd fragment, Unit 3         | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1240 | Decorated ceramic, body sherd fragment, Unit 3               | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1241 | Decorated ceramic, body sherd fragment, Unit 3               | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1242 | Lead fragment, possible fishing weight, Unit 3               | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1243 | Lead fragment, possible fishing weight, Unit 3               | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1244 | Lead fragment, possible fishing weight, Unit 3               | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1245 | Lead fragment, possible fishing weight, Unit 3               | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1246 | Lead fragment, possible fishing weight, Unit 3               | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1247 | Lead fragment, possible fishing weight, Unit 3               | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1248 | Lead fragment, possible fishing weight, Unit 3               | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1249 | Copper alloy cup handle, Unit 3                              | Ian Dunshee     | 10/29/2022 | NIKON D3400 |
| DSC_1250 | Copper alloy cup handle, Unit 3                              | Ian Dunshee     | 10/29/2022 | NIKON D3400 |

|          |  |             |                   |             |
|----------|--|-------------|-------------------|-------------|
| DSC_1251 | Copper alloy cup handle, Unit 3                | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1252 | Copper alloy cup handle, Unit 3                | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1253 | Lead fragment, possible fishing weight, Unit 3 | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1254 | Lead fragment, possible fishing weight, Unit 3 | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1255 | Lead fragment, possible fishing weight, Unit 3 | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1256 | Lead fragment, possible fishing weight, Unit 3 | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1257 | Ceramic fragment, base sherd, Unit 3           | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1258 | Ceramic fragment, base sherd, Unit 3           | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1259 | Ceramic fragment, base sherd, Unit 3           | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1260 | Clay pipe stem fragment, Unit 3                | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1261 | Clay pipe stem fragment, Unit 3                | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1262 | Clay pipe stem fragment, Unit 3                | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1263 | Clay pipe stem fragment, Unit 3                | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1264 | Bone shoulder fragment, Unit 3                 | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1265 | Bone shoulder fragment, Unit 3                 | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1266 | Bone shoulder fragment, Unit 3                 | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1267 | Bone shoulder fragment, Unit 3                 | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1268 | Bone shoulder fragment, Unit 3                 | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1269 | Bone shoulder fragment, Unit 3                 | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1270 | Bone shoulder fragment, Unit 3                 | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1271 | Bone fragment, rib, Unit 3                     | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1272 | Bone fragment, rib, Unit 3                     | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1273 | Bone fragment, rib, Unit 3                     | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1274 | Bone fragment, rib, Unit 3                     | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1275 | Bone fragment, rib, Unit 3                     | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1276 | Copper alloy instrument, Unit 3                | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1277 | Copper alloy instrument, Unit 3                | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1278 | Copper alloy instrument, Unit 3                | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1279 | Copper alloy instrument, Unit 3                | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1280 | Copper alloy instrument, Unit 3                | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1281 | Copper alloy instrument, Unit 3                | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |



|          |                          |             |                   |             |
|----------|--------------------------|-------------|-------------------|-------------|
| DSC_1282 | Leather fragment, Unit 2 | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1283 | Leather fragment, Unit 2 | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1284 | Leather fragment, Unit 2 | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1285 | Bone fragment, Unit 3    | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1286 | Bone fragment, Unit 3    | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1287 | Bone fragment, Unit 3    | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1288 | Bone fragment, Unit 3    | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1289 | Bone fragment, Unit 3    | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1290 | Bone fragment, Unit 3    | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1291 | Bone fragment, Unit 3    | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1292 | Bone fragment, Unit 3    | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1293 | Bone fragment, Unit 3    | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1294 | Bone fragment, Unit 3    | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1295 | Bone fragment, Unit 3    | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |
| DSC_1296 | Bone fragment, Unit 3    | Ian Dunshee | <b>10/29/2022</b> | NIKON D3400 |

## APPENDIX B: Mylar (Pro Formas) Inventory

| Accession# | Date       | Unit  | Level | Creators     | Title, Comments   | Pro Forma            |
|------------|------------|-------|-------|--------------|---|----------------------|
| 1          | 10/24/2022 |       | 3     | 2 JB RP LW   | Stern interpretation. Includes keelson measurements.  |                      |
| 2          | 10/23/2022 |       | 3     | 2 DS ME JB   | Outside Grid. Chain.  |                      |
| 3          | 10/28/2022 |       |       | ID JB        | Tank Bay Wreck.   | UFP                  |
| 4          | 10/23/2022 |       |       | ME DS        | Tank Bay Wreck. Wood, sheathing, lead shot (spoil), bone.   | UFP                  |
| 5          | 24-Oct     |       | 3     | 1 RP LW      | Tank Bay Wreck. Trilat points.  |                      |
| 6          | 24-Oct     |       | 3     | 1 RP LW      | Lead sheathing. Fastener.   | UFP                  |
| 7          |            |       | 3     | MT           | Tank Bay Wreck. Wood, sheathing, lead shot (spoil), bone.   | UFP                  |
| 8          | 24-Oct     |       | 3     | 2 LW         | Tank Bay Wreck. Flare Cartridge, coal, gudgeon, sternpost.  | UFP                  |
| 9          | 20-Oct     |       |       | ID OL KR RP  | Exploratory dive observations made at each meter along baseline. Green bottle. 41 metal fragments. chain. |                      |
| 10         | 21-Oct     |       | 1     | LH           | Tank bay. Bottle neck drawing.  |                      |
| 11         | 22-Oct     |       | 1     | 1 JB JM      | Tank Bay Wreck. Trilats of Artifacts recovered. Large iron concretion. Large fastener square.             |                      |
| 12         | 22-Oct     |       |       | 1 LH LW      | Tank Bay Wreck. Square fastener, trunnel.   |                      |
| 13         | 23-Oct     |       | 2     | 1 OL         | Tank Bay Wreck. Iron: Encrusted.  |                      |
| 14         | 21-Oct     | 1 & 3 |       | RP KR        | Tank Bay Wreck. Bottle neck   |                      |
| 15         | 21-Oct     |       | 1     | 1 KR RP      | Tank Bay Wreck. Loose timber. Iron Object.  |                      |
| 16         | 23-Oct     |       | 1     | 2 LH LW      | Tank Bay Wreck. Bottle Base. Iron artifact. lead.   |                      |
| 17         | 24-Oct     |       | 1     | 1 KR ID      | TBW. Concretion. Wood block. Thin metal. Nail holes.  | UFP                  |
| 18         | 28-Oct     |       | 1     | RP OL        | TBW. Timber measurements.   |                      |
| 19         | 22-Oct     |       | 1     | 3 LW         | TBW. Lead. Trunnel. Hull plank. Nothing found in dredge spoil.  | UFP                  |
| 20         | 17-Oct     |       |       | RP OL        | Stones forming a wall. Mussel line. Degraded ledge. Stone measurements.                                   |                      |
| 21         | 17-Oct     |       |       | RP OL        | Sea wall. Mussel line. Stone measurements.  |                      |
| 22         | 17-Oct     |       |       | ID KR        | Careening Block Sea Wall Profile.   |                      |
| 23         | 17-Oct     |       |       | ME DW        | Sea wall. Mussel line. Stone measurements.  |                      |
| 24         | 17-Oct     |       |       | KR           | Stone Quay. Mussel line. Recessed area.   |                      |
| 25         | 19-Oct     |       |       | RP OL        | Stone Quay. 40-45m.   |                      |
| 26         | 19-Oct     |       |       | RP OL        | Stone Quay. 40-45m.   |                      |
| 27         | 19-Oct     |       |       | ID KR        | Sea Wall. 60-65m.   |                      |
| 28         | 19-Oct     |       |       | DS ME        | Sea wall 55-60m.  |                      |
| 29         | 18-Oct     |       |       | RP OL DW ME  | Antigua Dockyard cross-section.   |                      |
| 30         | 18-Oct     |       |       | RP OL        | Cross-section. 1m 5m 10m  |                      |
| 31         | 18-Oct     |       |       | DS KR ID NB  | Keystone. 35-40m  |                      |
| 32         | 18-Oct     |       |       | ID KR DS NB  | Sea wall Cross-Section. 25-30m  |                      |
| 33         | 19-Oct     |       |       | RP OL        | Sea wall cross section 40-45  |                      |
| 34         | 19-Oct     |       |       | RP OL        | Sea wall cross section 40-45  |                      |
| 35         | 19-Oct     |       |       | DS KR ID ME  | Sea wall cross section 60 & 65  |                      |
| 36         | 19-Oct     |       |       | DS KR ME     | Quay 50-55m   |                      |
| 37         | 18-Oct     |       |       | DS KR ID NB  | Baseline offsets cross sections. Keystone. 35-40m   |                      |
| 38         | 19-Oct     |       |       | DS ME KR ID  | Quay 50-60m   |                      |
| 39         | 19-Oct     |       |       | ID KR DS NB  | Sea wall 25-30m   |                      |
| 40         | 15-Oct     |       |       | NB           | Cannon 13 (see back)  | Cannon               |
| 41         | 23-Oct     |       | 3     | 2 ME DS JB   | Bone.   | SO                   |
| 42         | 23-Oct     |       | 1     | 1 JM LH OL   | Concreted fastener.   | SO                   |
| 43         | 22-Oct     |       | 3 1/2 | DS ME JB     | Fishing weight.   | SO                   |
| 44         | 22-Oct     |       | 3 1/2 | DS ME JS     | 2 Gun flints  | SO                   |
| 45         | 22-Oct     |       | 3 1/2 | DS ME JB     | Pipe stem   | SO                   |
| 46         | 20-Oct     |       |       | ME           | Fort Berkeley Powder Magazine   | Fortification Survey |
| 47         | 20-Oct     |       |       | ME NB DS J D | Fort Berkeley   | Fortification Survey |
| 48         | 20-Oct     |       |       | DS           | Fort Berkeley Blackhouse  |                      |
| 49         | 19-Oct     |       |       | DW           | Possible 9, possible 7  | Cannon               |
| 50         | 22-Oct     |       |       | I W I H RR   | Square Fastener   |                      |





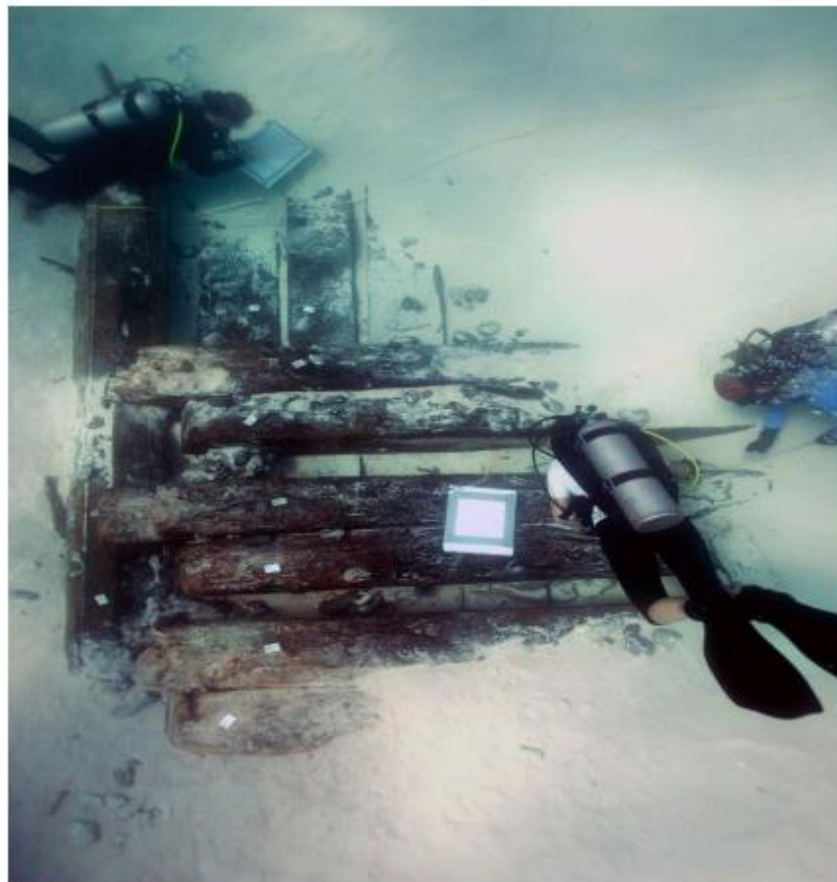
APPENDIX E: Artifact Inventory

| Unit 1               |    |  |
|----------------------|----|--|
| 0730-0733            | 1  | Glass Bottle Finish and Part of Shoulder (Green)               |
|                      | 6  | Carbonized Wood (Many Fragments)                               |
|                      | 7  | Quartz   |
| 0675-0678            | 8  | Small Mammal Bone- Femur (Possibly Rat)                        |
| 0681-0682            | 9  | Bone Fragment Mammal   |
| 0679-0680            | 10 | Ceramic Sherd  |
|                      | 11 | Ceramic Sherd - Base, Refined Earthenware                      |
| 0722-0729            | 12 | Pipe Bowl with designs of Sun, Rose, and Potential Makers Mark |
| 0742-0745            | 14 | Square Fastener (same bag as fishing weight)                   |
|                      | 16 | Concreted fastener   |
|                      | 23 | 2 Fasteners on Plank   |
|                      | 30 | 5 Pieces of Lead Sheathing                                     |
| 0714-0717            | 31 | Porcelain blue flower  |
| 0718-0721            | 32 | Rat bone (21 fragments)  |
| 0756-0759            | 37 | Square Fastener (concretion bulge in middle)                   |
| 0760-0763, 0711-0712 | 38 | Iron Sheathing (concretion popping on top)                     |
| 0629-0632            | 40 | Small Iron Concretion with possible Ballast                    |
| 0654-0665            | 47 | Lead Along Keel  |
| 0688-0690            | 54 | Bone Fragments (2)   |
| 0691-0696            | 55 | Treenails  |
| 0713-0714            | 59 | Concreted fastener   |
| 0718-0720            | 61 | Mammal Bone  |
| 0721-0723            | 62 | Mammal Bone (2 Frags)  |
| 0751-0754            | 71 | Concreted Trunnel  |
| 0758-0761            | 72 | Wine Bottle Base   |
| 0755-0757            | 73 | Iron Fastener Top?   |
| 0646-0647            | 82 | 1 x Iron Sheathing   |
| 0650-0651            | 83 | 23 x Wood  |
| 0652-0653            | 84 | 3 x Burnt Wood   |
| 0658-0659            | 85 | 4 x Burnt Wood/Metal   |
| 0660-0661            | 86 | 29 x Ballast Concretion  |
| 0664-0665            | 87 | 22 x Wood  |
| 0666-0667            | 88 | 3 x Coal   |
| 0670-0671            | 89 | 1 x Bone   |
| 0672-0673            | 90 | 6 x Ballast Concretion   |
| IMG_0255             | 96 | 80 Wood fragments  |
|                      |    |  |
|                      |    |  |

| <b>Unit 2</b> |    |   |
|---------------|----|---|
|               | 24 | Iron Concretion                                   |
| 0665-0670     | 39 | Porcelain blue wave pattern (Rice Bowl)           |
| 0637-0639     | 45 | Glass Fragments (1 Modern Green; 1 Olive Green)   |
| 0640-0653     | 46 | Bone-Vertebre                                     |
| 0666-0669     | 48 | Mammal Bone Fragment                              |
| 0682-0684     | 52 | Ceramic- Porcelain Base                           |
| 0685-0687     | 53 | Ceramic- (Possibly Delft) Curved Rim              |
| 0703-0706     | 58 | Bone Fragment                                     |
| 0724-0726     | 63 | Leather Piece                                     |
| 0727-0728     | 64 | Mammal Bone (2 Frags)                             |
| 0729-0731     | 65 | Brown Salt Glazed Stoneware - Body                |
| 0732-0733     | 66 | White Ceramic - Body                              |
| 0734-0735     | 67 | Ceramic Sherd, Body, Possibly Biot Jar            |
| 0736-0737     | 68 | Mammal Bone                                       |
| 0738-0740     | 69 | Tile Sherd/Brick Frag?                            |
| 0762-0765     | 74 | Copper Tube (Modern?)                             |
| 0676-0677     | 91 | 16 x Wood   |
| 0678-0679     | 92 | 4 x Bone  |
| 0680-0681     | 93 | 2 x Coal  |
| 0686-0688     | 95 | 11 Wood Chunks with 1 x Glass (modern)            |
|               |    |   |
|               |    |   |
| <b>Unit 3</b> |    |   |
|               | 2  | Glass Shard (Possibly Modern, Green)              |
|               | 3  | Glass   |
| 0689-0693     | 4  | Fishing Weight (in bag with square fastener)      |
|               | 5  | Lead  |
|               | 13 | Feathered Edge Creamware                          |
| 0702-0709     | 15 | Dredge Spoil - Two Gun Flints and Two Pipe Steams |
| 0694-0697     | 17 | Cow bone  |
| 0698-0701     | 18 | Copper alloy mystery item                         |
|               | 19 | 5 Lead Sheathing                                  |
|               | 20 | Ballast/Concretion                                |
|               | 21 | Fibers  |
|               | 22 | Charcoal  |
|               | 25 | Dredge Spoil                                      |
|               | 26 | Lead Sheathing                                    |
|               | 27 | Lead Sheathing                                    |
|               | 28 | Charcoal  |
|               | 29 | Wood  |
| 0734-0737     | 33 | Ceramic- black/white wavy                         |

|                         |    |   |
|-------------------------|----|---|
| 0748-0751, 0709-0710    | 35 | Lead Sheathing, Rectangle; 10 nail holes          |
| 0752-0755, 0707-0708    | 36 | Lead Sheathing, Grey with spine going down middle |
| 0621                    | 41 | Musket Ball                                       |
| 0625-0627               | 42 | Feather Edged Creanware; 1 Rim and 1 Base         |
| 0630-0632               | 43 | Mammal Bone - Rib                                 |
| 0633-0635               | 44 | Chert (Possibly Gun Flint) (Brown)                |
| 0670-0671               | 49 | Mammal Bone Fragments-3                           |
| 0672-0677               | 50 | Lead Sheathing                                    |
| 0678, 0680-0681         | 51 | Lead Fishing Weights                              |
| 0697-0699               | 56 | Curved Glass Shard - Olive Green                  |
| 0700-0702               | 57 | Lead  |
| 0715-0717               | 60 | Mammal Bone                                       |
| 0621-0622               | 75 | 10 x Wood   |
| 0623-0624               | 76 | 10 x Ballast/Concretion                           |
| 0625-0626               | 77 | 3 x Charcoal                                      |
| 0633-0634               | 78 | 122 x Wood  |
| 0638-0639               | 79 | 2 x Iron Sheathing                                |
| 0642-0643               | 80 | 11 x Ballast Concretion                           |
| 0644-0645               | 81 | 1 x Coal  |
|                         |    |   |
|                         |    |   |
| <b>Unspecified Unit</b> |    |   |
| 0738-0741               | 34 | Ceramic- grey, cross-hatching                     |

APPENDIX F: UNESCO UNITWIN Program



Program in Maritime Studies, History Department, East Carolina University  
In partnership with National Parks Authority (Antigua and Barbuda)  
and Université des Antilles

UNESCO UNITWIN UNDERWATER ARCHAEOLOGY TRAINING PROGRAM  
16-30 October 2022





## SCHEDULE OF CLASSES

### **Sunday 16 October**

6-7pm

- Introductions
- UNESCO UNITWIN Training

Presenters: Lynn Harris and Jen McKinnon

### **Tuesday 18 October**

6-7pm

- Archaeology Search and Survey
- Site Types

Presenter: Ryan Bradley

### **Thursday 20 October**

6-7pm

- 2D Recording and 3D Recording
- Excavation

Presenters: Jeremy Borrelli and Jen McKinnon

### **Saturday 22 October**

2-5pm

- Practical Mapping Session

Presenter: Jeremy Borrelli and Lynn Harris

### **Tuesday 25 October**

6-7pm

- Dating and Artifact Identification

Presenter: Lynn Harris

### **Thursday 27 October**

6-7pm

- Laws and Citizen Science

Presenter: Chris Waters and Jen McKinnon

## WEBSITE LINKS

Program in Maritime Studies

<https://maritimestudies.ecu.edu/>

UNESCO UNITWIN underwater archaeology

<http://www.underwaterarchaeology.net/ABOUT.htm>

<http://www.underwaterarchaeology.net/OBJECTIVES.htm>

### **Presenter Bios and websites**

Lynn Harris

<https://history.ecu.edu/lynn-harris/>

Jen McKinnon

<https://history.ecu.edu/jennifer-mckinnon/>

<https://people.ecu.edu/mckinnonje/>

**Jeremy Borrelli**

<https://history.ecu.edu/jeremy-borrelli/>

Ryan Bradley

<https://diving.ecu.edu/>