

Vietnam Maritime Archaeology Project 2018

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Abstract

This essay is a compilation of photographs from the Vietnam Maritime Archaeology Project (VMAP) 2018. From 26 January to 11 February 2018, four students/professionals from Southeast Asian countries joined VMAP funded by the Southeast Asian Ministers of Education Organization Regional Centre for Archaeology and Fine Arts (SEAMEO SPAFA). They were Agni Mochtar (Flinders University/Indonesia), Jannah Marie Dagaas (University of the Philippines), Pornnatcha Sankhaprasit (Underwater Archaeology Division/Thailand), and Tep Sokha (Department of Archaeology and Prehistory/Cambodia). VMAP's first project was in 2008 and this year the field school was a joint project with Flinders University. The fieldwork took place in two of the World Heritage Sites in Vietnam, Huế Imperial City and Hội An Ancient Town, and in the Marine Protected Area at Cù Lao Chàm. The four participants worked in international groups with other trainees to learn about maritime archaeology in Vietnam through a combination of terrestrial and maritime-based activities. These activities included marine geophysics training (side-

scan sonar survey), a diving project, a cannon-recording project, and a traditional boat-recording project.

Keywords: Vietnam Maritime Archaeology Project, Vietnam, maritime archaeology, Huế, Hoi An, Cù Lao Chàm, field school

Introduction

Since the beginning, the Vietnam Maritime Archaeology Project (VMAP) consisted of an international group of scholars working together with Vietnamese archaeologists. In 2018, 20 trainees and eight supervisors joined the field school. The participants came from thirteen different countries: Vietnam, Cambodia, Thailand, the Philippines, Indonesia, Malaysia, India, Australia, France, Ireland, Spain, UK, and USA. Besides the Southeast Asian Ministers of Education Organization Regional Centre for Archaeology and Fine Arts (SEAMEO SPAFA), several other organizations generously provided grants and support for the success of this field school. They were Institute of Archaeology-Vietnam, Flinders University, the MaP Fund, Australia Awards, Teledyne, and the Walter Munk Foundation for the Oceans.

The VMAP 2018 field school was a combination of terrestrial and maritime-based activities to give participants the opportunity to learn various skills needed in conducting maritime archaeology research. Training sets in this field school included marine geophysics training (side-scan sonar survey), a diving project, a cannon-recording project, and a traditional boat-recording project. During the two recording projects, aside from manual recording, participants also learned to do 3D-modelling. Participants were divided into four teams: Blue, Green, Red, and Yellow. Each team had randomly-selected members to ensure the diversity of nationality and level of skills. While the first three teams mostly consisted of divers, the last one was comprised of non-divers. The four authors were in different teams: Pornnatcha in Blue team, Agni in Green team, Jonnah and Sokha both in Yellow team.

For the majority of the two-week fieldwork, the teams did not meet with friendly weather in Huế and Hoi An. A sudden monsoon wind ruined the organizers efforts, despite them carefully choosing specific dates to avoid bad weather. Because of this situation, the teams had only two days of diving towards the end of the fieldwork. Nonetheless, all participants were still able to do other training sets to learn multidisciplinary approaches in maritime archaeology. The cannon recording project in Huế, the side-scan sonar survey on Thu Bồn River, traditional boat recording in Kim Bồng Carpentry Village, and 3D-modelling practice in the Hoi An Museum were all successfully done despite the poor weather.

Cannon Recording

During the first week of fieldwork, Jonnah and Sokha, along with their fellow Yellow team members visited Huế to record Dutch cannons kept in the museums. This project was supervised by Prof. Mark Staniforth (VMAP lead coordinator), Dr. Le Thi Lien (Institute of Archaeology, Vietnam), and John McCarthy (Flinders University). The aim of this project was to look for Dutch cannons and to cross-match them with known, albeit undiscovered, shipwrecks in Vietnam. In searching for these cannons,

Yellow team went to two museums, the Royal Antiquities Museum and Thừa Thiên-Huế History Museum.

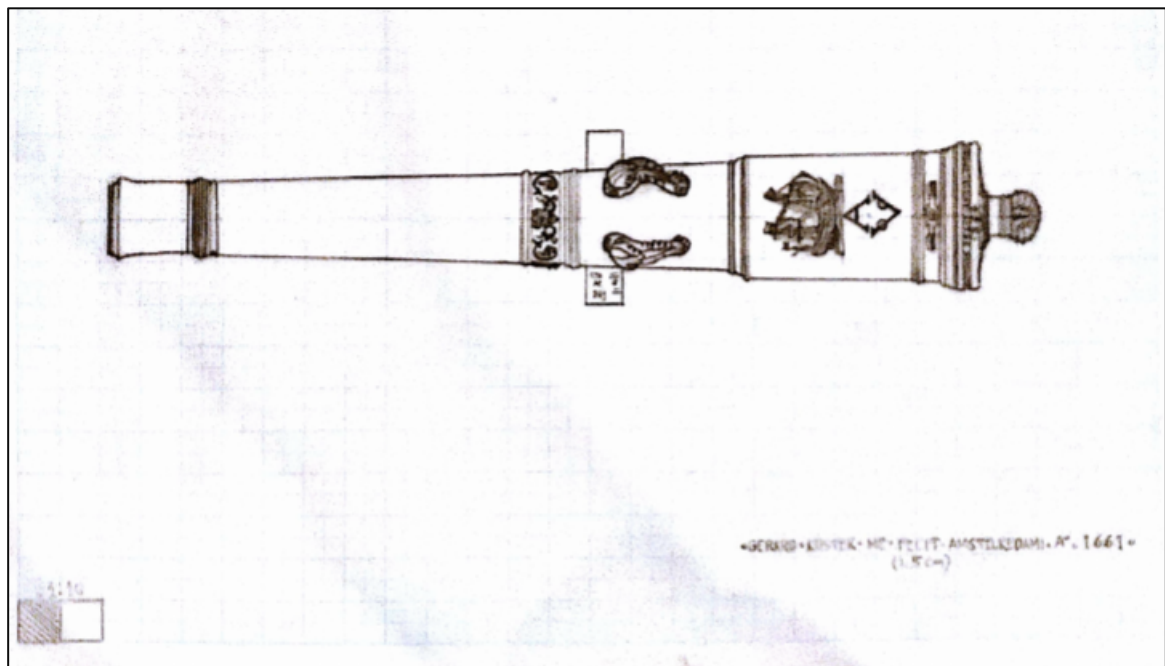
The visit to the earliest museum in Huế, the Royal Antiquities Museum (Bảo tàng Cổ vật Cung đình Huế), was a success. Four cannons were displayed on the front yard of this former Emperor's library. Yellow team recorded these cannons by measuring them to produce sketches and drawings. The team also took series of photographs of the cannons to be processed for 3D photogrammetry, under the supervision of John McCarthy. In the other museum, Yellow team also found cannons, but none of them were Dutch. This visit was still a success since the team had the opportunity to observe an eight-metre long wooden anchor kept in the museum. The details of this anchor, however, were nowhere to be found.



Long An Palace in Huế Royal Antiquities Museum, with Dutch cannons on display. Source: Tep Sokha.



Yellow team recording one of the Dutch cannons at Long An Palace in Huế Royal Antiquities Museum. Source: Jonnah Marie Dagass.



Yellow team's sketch of cannon recording. Source: Jonnah Marie Dagass.



John McCarthy gives briefing before photogrammetry training. Source: Dr. Le Thi Lien.



The final result of cannon 3D model by using Photogrammetry process. Source: John McCarthy.



Wooden anchor in the Thừa Thiên-Huế History Museum. Source: Dr. Le Thi Lien.

Side-Scan Sonar Survey

This survey method was adopted from the geophysics field to help maritime archaeologists to survey larger area and save significant amount of diving time. All four teams had the experience of using Lowrance HDS-9 Carbon unit and Imagenex SportScan 2F unit. This experience gave the trainees the idea of various types of equipment so they would be able to choose the correct unit for different situations.

Before commencing the survey, John Naumann (Flinders University), showed the participants how to set up the equipment on land. The participants practiced the survey on Thu Bồn River in Quang Nam Province, on board a small local boat QNa 0481. On the day of the survey, Mark Polzer (Flinders University) supervised participants in practicing with SportScan 2F unit. They experienced some constraints in the beginning, mostly because of their unfamiliarity with the system. This system required more manual work such as holding the transducer fish, but the collected data was almost always satisfactory. In contrast, Lowrance system was fairly easier to operate. With the supervision from Ian McCann (University of New England) and Patrick Morrison (University of Western Australia), participants tried to look for anomalies on the river bed using the Lowrance unit. Uncertainty appeared as the main issue since firm interpretation was difficult to be drawn from low resolution data.



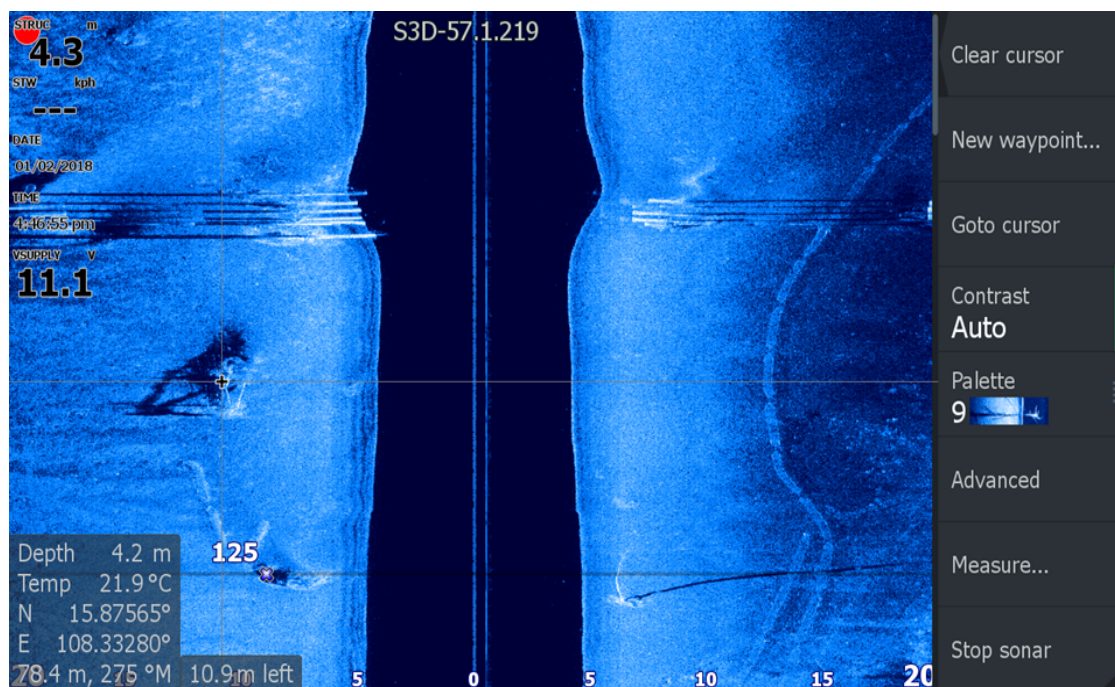
Mark Polzer preparing side scan sonar equipment. Source: Howard Boyle.



Ian McCann gives instruction of operating Lowrance unit to Green team. Source: Agni Mochtar.



Green team discussing the route for side scan sonar practice. Source: Howard Boyle.



An anomaly shown on the screen of Lowrance. Source: Ian Mccann.

Traditional Boat Recording

Field school participants learned about Vietnamese traditional boat at Kim Bồng, a small village across Hội An, where the locals still built boats and ships using traditional techniques. On the shipyard housed a traditional boat, called *ghe bầu*, which was suitable for recording practice. Sally May (Western Australia Museum) showed the participants the manual on ship/boat recording technique. Due to time constraints, teams only measured the starboard side of the boat.

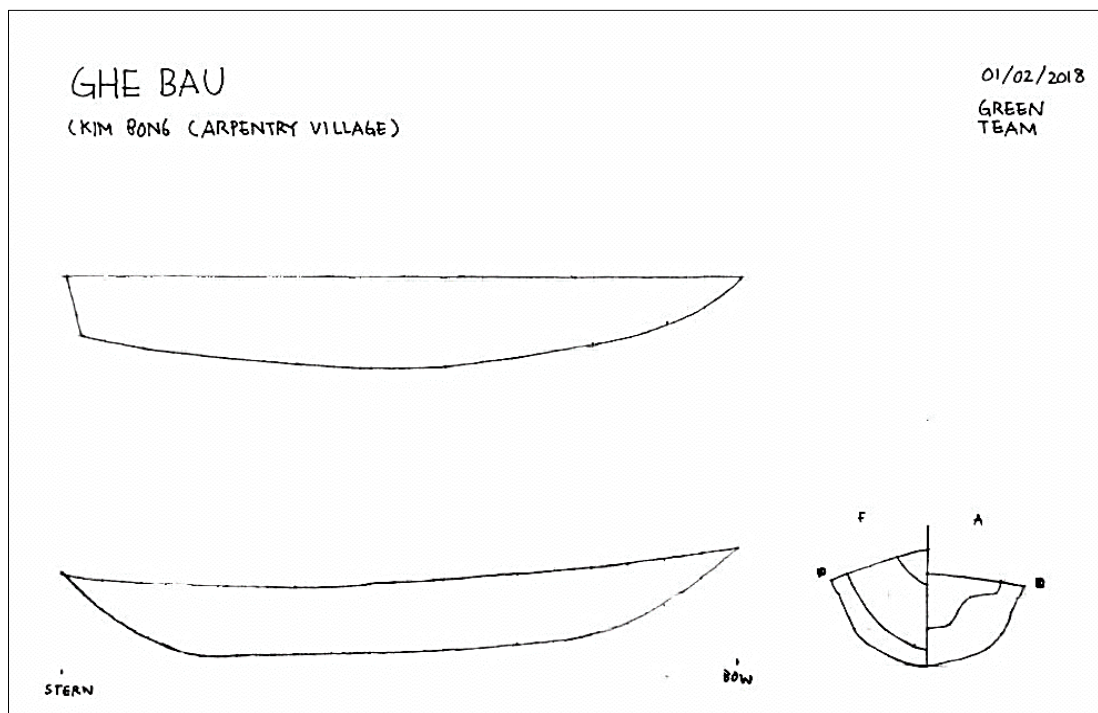
After measuring the boat, results from each team were combined to produce ship lines of the *ghe bầu*. Ship lines represented the unique hull shape of each boat because every boat had its own design and shape. They also helped with initial calculation, analysis, and prediction of the boat's power and performance. Plan drawings showed the characteristic of the boat from three orthogonal views: front view (body plan), side view (sheer plan) and top view (breadth plan). These plans were interrelated to each other.



Participants recording *ghe bầu* at Kim Bồng Carpentry Village. Source: Agni Mochtar.



Plotting the measurement on graph paper. Source: Agni Mochtar.



Green team's ship lines. Source: Agni Mochtar.

Heritage Mapping

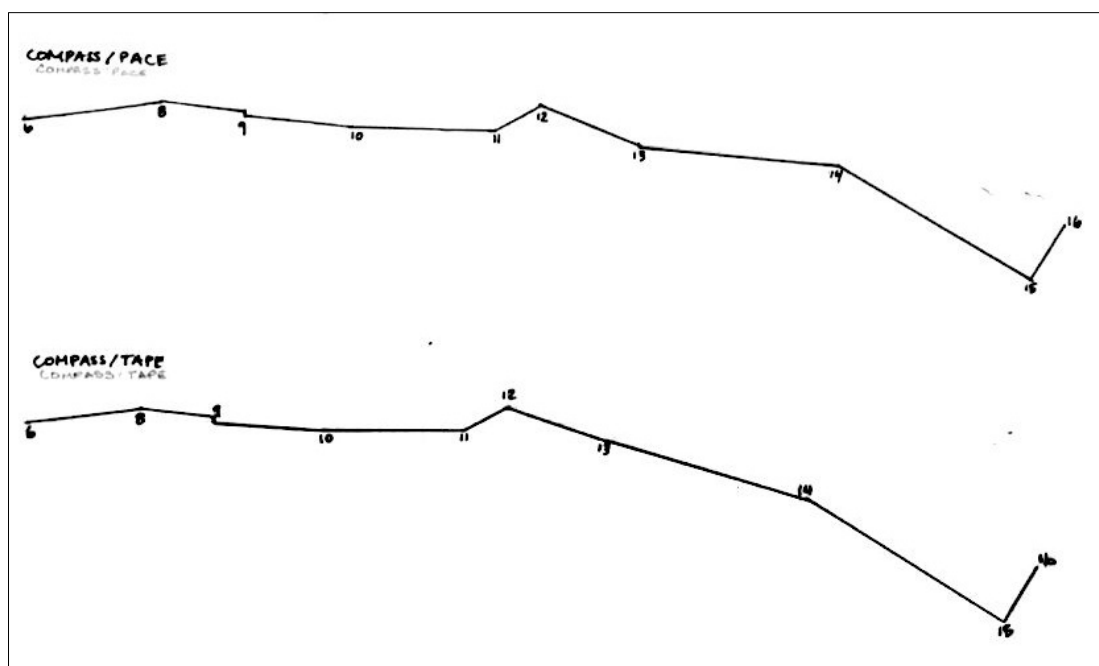
Prof. Mark Staniforth took each team to survey heritage places inside Hội An Ancient Town. During the survey, participants had to record information of the places and the route they took. This activity was a practice in applying various methods in archaeological survey, both with and without equipment. Participants worked within their team to distribute the tasks in doing the survey. The team stopped in several spots along a route, noted down the place's name and address, took photographs, recorded its GPS coordinates (both in UTM and latitude-longitude systems), measured the distance between two spots by pacing and measurement tape, and checked the compass bearing of one spot from the previous one. By the end of the session, all these information were compiled to produce mud maps of the survey route. The maps displayed a slight difference in accuracy between the different methods used in this exercise. These insights may have proved beneficial for the participants as a reference when they were doing the actual survey.



Mark Staniforth briefs Blue team before heritage survey. Source: Pornnatcha Sankhaprasit.



Green team plotting data from heritage survey. Source: Samantha Hruban.

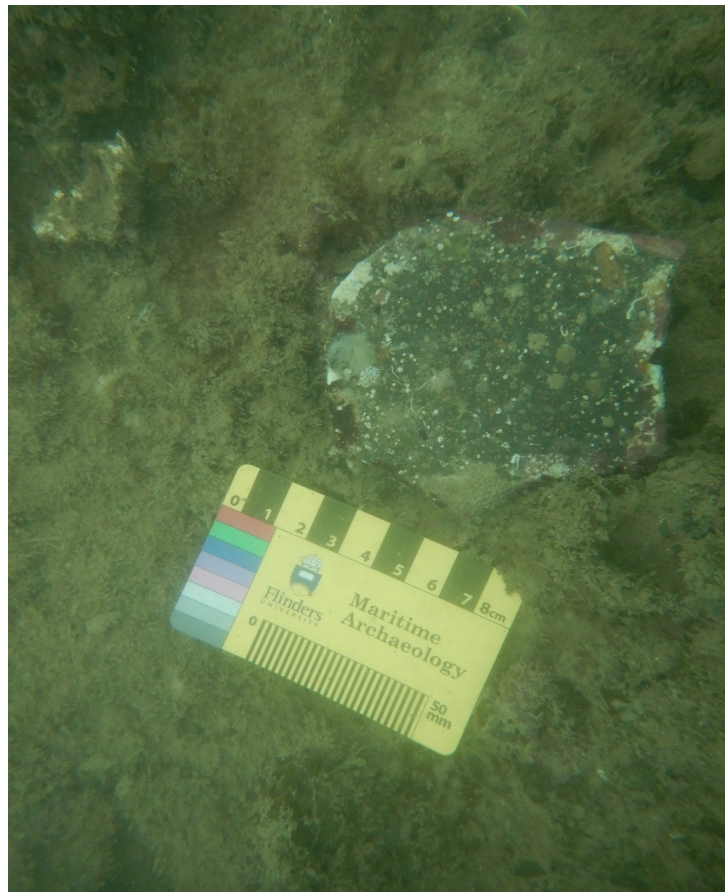


Map showing comparison between measuring distance using paces and measurement tape. Source: Agni Mochtar.

Diving Activity

The diving spot in this field school was Cù Lao Chàm, the islands northeast of Hoi An. Previous VMAP fieldworks had several dives in this area and found many maritime archaeology sites at the islands. Due to weather constraints, Blue, Green, and Red team had to take turns diving in the two last days of the fieldwork. Using SCUBA and buddy system, divers planned to survey two sites, ceramic sherds at Bãi Ông and stone-anchor stock at the southeast tip of Bãi Hương.

The site at Bãi Ông was relatively shallow, only 3–5 m deep. Participants practiced the circular search method here and tried to photograph a cluster of pottery and ceramic sherds for 3D modelling. Despite the poor visibility, the result turned out quite remarkable. During the dives, the water at the site was calm with almost no swells. The stone anchor site, however, was quite the opposite. This site was in water channel so the currents were really strong. For safety reason, teams had to cancel the dive at this site.



One of pottery sherds in Bãi Ông site. Source: Howard Boyle.



Divers getting ready to survey Bãi Ông site. Source: Pornnatcha Sankhaprasit.



Joanne Edney, the safety officer, checking all divers prior to each dive. Source: Pornnatcha Sankhaprasit.