

New Maritime Archaeological Discoveries from SS Indus Ship wreck (1885) in Sri Lanka

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ABSTRACT

The Maritime Archaeology Unit (MAU) of the Central Cultural Fund gathered historical evidences on the SS Indus through archival research and a site survey to identify the shipwreck in 2013 and 2014.

The MAU identified an iron wreck close to the coast of Mullaitivu and tentatively identified it as the SS Indus which sank in 1885 with the valuable carved stone plaques of Baharhut Stupa, India (3rd century BC). Alexander Cunningham, the former Archaeological Commissioner of British India [appointed in 1861] intended to send these plaques to be displayed in the London Museum. According to historical records, they salvaged some of the cargo but there is no record on the fate of the stone plaques.

The MAU identified an iron wreck about 5km from the Mullativu lighthouse (now in ruins) in 2013. Fishermen and divers helped locate the wreck. According to historical records and nautical charts, the location of this wreck seemed to be the place here the Indus sank. The MAU explored and recorded the site by using photographs, sketches and GPS plotting. The team completed an initial survey but did not find any stone plaques. However, in 2014 and 2017, the MAU excavated the site and identified evidence that proved the wreck is the SS Indus. A drawing of the site and excavated of three test pits were completed in the process. The team unearthed several artifacts but these could not prove the identity of the ship. The MAU is continuing excavations in the site at the moment (Until November 2019) and hope to discuss about the new evidences found from entire research with this paper.

Key words: SS Indus, Sri Lanka Maritime Archaeology Unit, underwater excavations, Baharhut Stupa, Mullaitivu

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INTRODUCTION

The War which prevailed over three decades in Sri Lanka ended up in mid of 2009. Due to this war (researches and experimental activities) Maritime Archaeology was limited only to Southern coast. In 2011 MAU widened its researches to North-Western, Northern, Eastern and Western coastal areas, as the Central Cultural Fund (CCF) initialized its power in economy. In August 2013, first Maritime archeological research project which was based on Northern coast started as a result of that particular project. The Northern coastal areas such as Mullativu, Jaffna, Delft and Mannar were

included in it. SS Indus is the greatest discovery which was made during this research period. (SS.Indus Exploration Report, 2013).

LOCATION OF THE SITE

These Archaeological sites were found, about 5Km away from the North Eastern coastal belt of Mahalkudierappu; in Mullaitivu district at Northern province of Sri Lanka (GPS Location N- 09 .1 and E- 080, 52,097’).

RESEARCH HISTORY

In 2008, the Maritime researches were done by the MAU around the Great Basses reef of the Southern coast. Before that, the information which they knew from “The Treasure of the Great Reef” which was written based on the researches that were done by Clark and his team in that zone and the things that they knew already were also considered by the MAU team. Many of the team members had attractive feelings towards Clark’s saying;

“Fifty miles to the north of Trincomalee, on a shoal known as Mullative, lays another important wreck - and one which may contain the most valuable cargo lying beneath the waters around Ceylon. On November 9, 1885 the 3,462 tons P & O liner Indus was steaming south from Madras to Colombo when she went aground at full speed owing to a gross error in navigation. (She was twenty miles off course, and her captain was lucky to get away with a twelve-month suspension of his tickets.)

At high tide, the Indus was worked off the shoal, and then had her second piece of bad luck. She came to rest immediately above one of her own anchors, and as she rose and fell in the waves she quickly knocked a hole in her bottom and sank within a few hours. There was no loss of life, but none of the cargo could be saved.

Aboard the Indus was the collection of the finest works of art from the Stupa of Bharut. India (second century B.C) which had been specially selected by the director of the Indian Archaeology, General Cunningham. Today, these statues would be priceless – if they are still on Mullativu shoal. But we are not certain of this; we know that salvage operations were later carried out on the Indus with a view to recovering the indigo and other valuables aboard her. Would the divers also have bothered to bring up what they probably considered to be a few old statues? We rather doubt it, but until our researchers have settled this important point, the Indus will remain on our list of possibilities, not certainties.” in the praise. The war climate delayed the beginning of the mission of finding SS Indus year by year.

It took several years to clear the areas entirely; from the bombs which were placed both in the sea and the land in the Mullativu area by the terrorists. The lack of Maritime Archaeologists was also a great problem for the MAU team in this period. However, after avoiding these frailties some members of the MAU team started to study about Archival before the maritime researches for finding SS Indus. (Muthucumarana, 2013 Pg.2-3)

The old newspaper reports and photographs which were in the Department of National Archives Sri Lanka, National Library of Australia (Perth W.A),Green which National Maritime Museum of London; could reconstruct the story of building SS Indus and the tragic finish of it using the sufficient study by the team (Fig. 1).

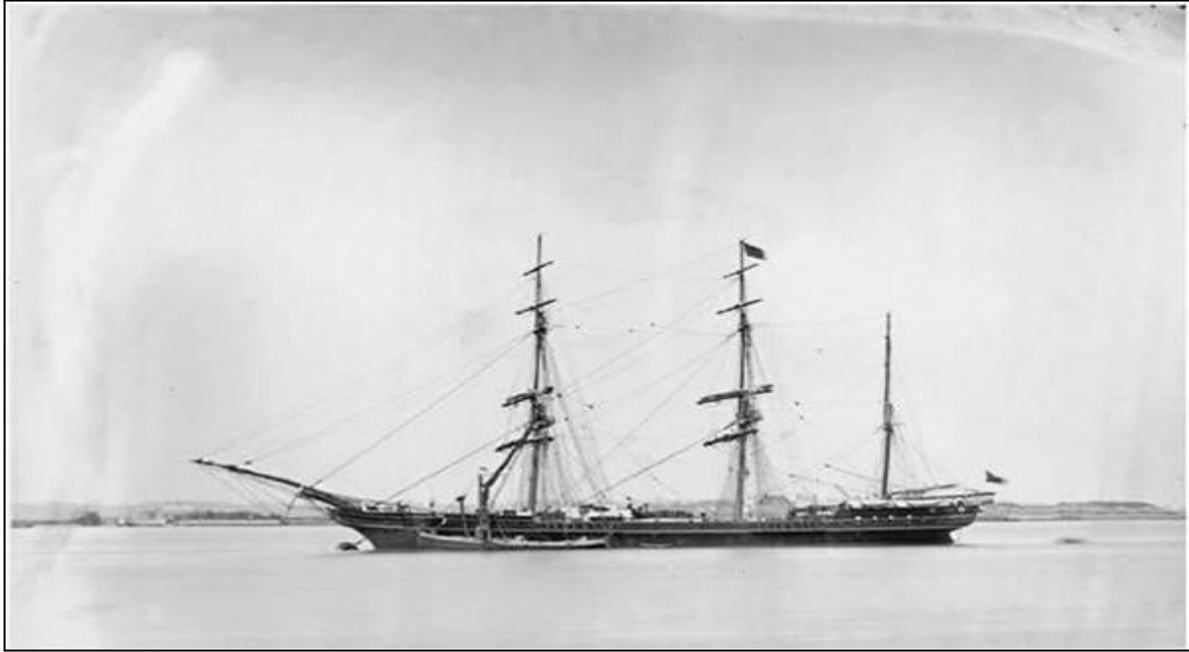


Figure 1: SS Indus.

The newspaper articles, Times of Ceylon, published in 12,13,15 and 17 of November 1885 during the period when SS Indus was sunken, were found from the Department of National Archive of Sri Lanka and the information was of high importance (Fig. 2)

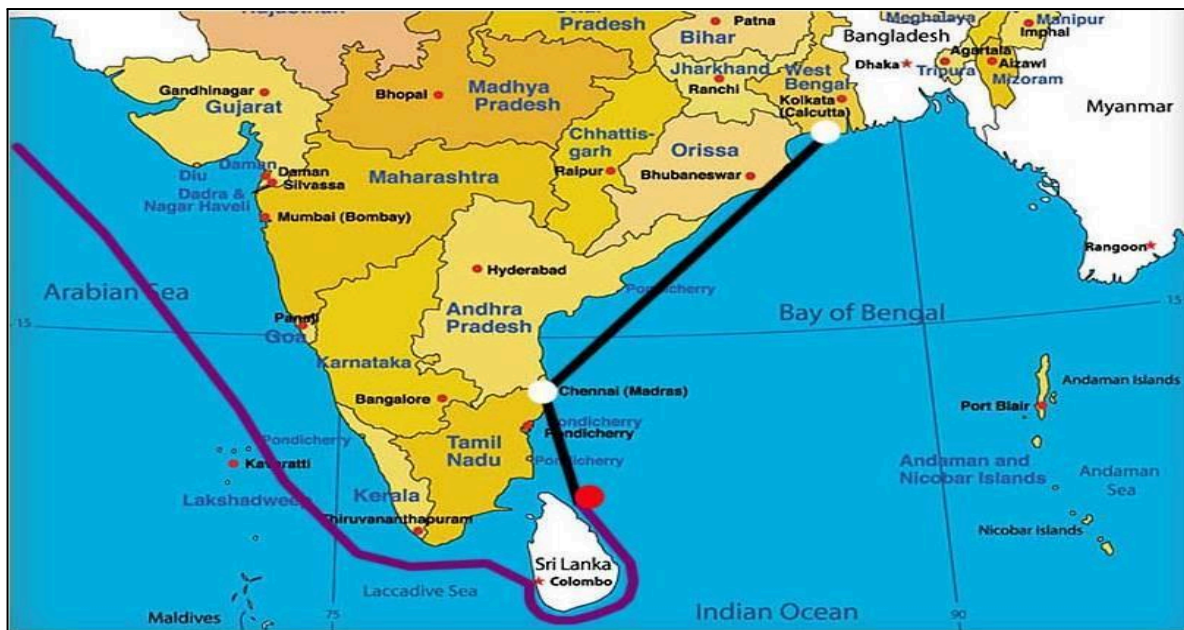


Figure 2: Final Route of the SS Indus.

The times of Ceylon published the story of the ship which sailed from Madras harbor. It nicely evaluates the story of it from the start until it sank, and the incidents which happened; by using the given evidence (on an interview). Important point there is that, they did not throw the things in to the sea in order to make the ship light. At least the captain didn't give permission to move out the personal items of the passengers. So it had a great chance; for the sinking of the Bhahrut stone sculptures along with the ship. There is no clear note about (how) the (ancient) Bharuth stone sculptures of this ship, in the above mentioned newspaper articles of Daily news published on 3rd December, 1885 which could be found in National Library Australia. Also, the fact sheet of P & O ship company, the owner of the ship demonstrates its main ship items as; wheat, 760 chests of Indigo and Tea. According to this, any of the above references doesn't have evidence to show that, the SS Indus ship transported many artifacts of Bharuth which were belonging to the 2nd century BC. It is because these artifacts were (registered and) shipped by sir Alexander Cunningham's personal property; that let it belonged to the London Museum.

Apart from Cleark's statement, Charles Godakumbure, the commissioner of Ceylon Archeological department in 1960's declared the statement which inspired the research project of finding SS Indus, lead out by the MAU.

The below mentioned line which he pointed in administrative report was given out in 1962 -63 by him is of higher importance.

"The possibility of doing more undersea archaeology in Ceylon in the near future takes our mind to the invaluable collection of works of art from the *stupa* of Bharhut (2nd century B.C.) lost in 1885 in the wreck of the P & O liner INDUS that ship aground on a shoal known as Mulaitivu, 50 miles north of Trincomalee (Fig. 3).

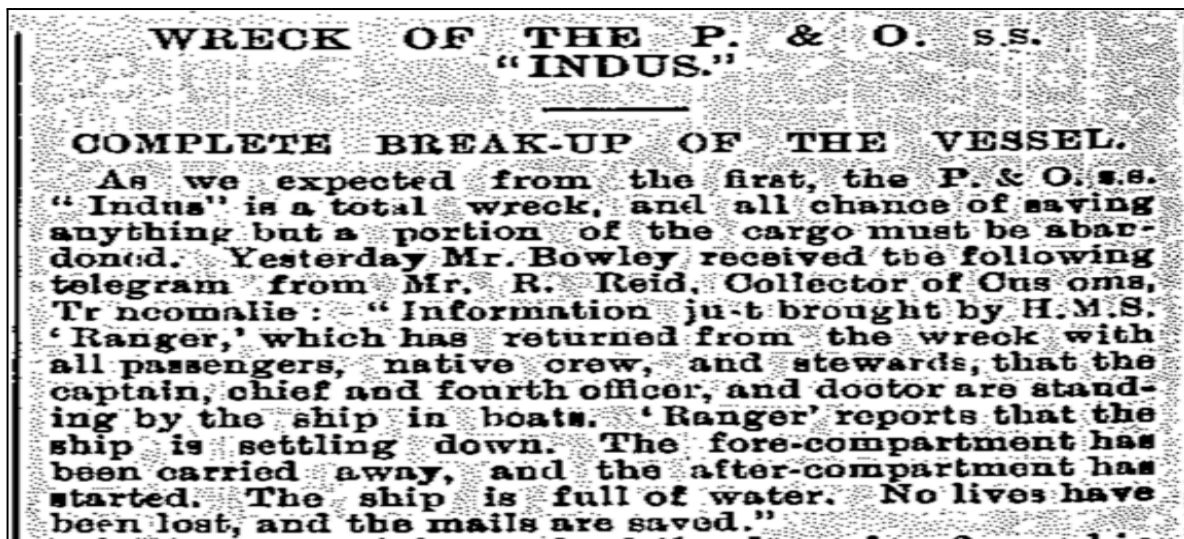


Figure 3: News article of the wreck.

It is known that some salvage operations were attempted at the time, with what results we do not know. We shall therefore, be thankful if anyone with information on this matter would pass on the same to Mr. Arthur C. Clarke or to us.

Action is being taken to declare the area of the wreck an Archaeological Reserve within the meaning of the Antiquity Ordinance.”

Our investigation of the archival documents confirmed that there have been attempts to excavate cargo from the Indus but there is no evidence of any success. It is therefore more likely to be that there has been no historical disturbance of the site which remains untouched since the ship sank. No evidence of disturbance soon after the ship was lost because there were perilous waves in monsoon weather at that time, nor in later years before the development of equipment to recover heavy items from a wreck or to stay underwater at such a depth for sufficient time. There is possibility that the strong waves would have resulted in sand covering the cargo which would add to the difficulty of retrieving it. Only in very recent times, have new techniques and equipment are being available to allow such excavation. These facts, together with Arthur C Clark’s, statement that he had not found the wreck or cargo, is the proof of the sculptures remaining intact beneath the sand. (samaraweera.N.,2014,p.941.)

Apart from this, the statement given by Indian Archaeologist, "Rao" in 1987 gives a short description about the relevant ship. “The P& O Liner *Indus*, which carried the second century BC Buddhist sculptures of Bharhut sank 50 miles north to Trincomalee in Ceylon on 1885. An attempt made to salvage them was not successful”.

Dr. Gaur as who is studying about these statements, give an opinion over the Bharhutstone sculptures in SS Indus. “This particular wreck was very popular among the archaeologists as Cunningham was first in charge of Indian Archaeology in 1860. I personally believe records may be in Kolkata archive as; ship must have been embarked from Kolkata”.

While analyzing the above-mentioned points, although isn't revealed that Bharhut artifacts were sunken when the SS Indus was sinking, we strongly believe that they must have being existed.

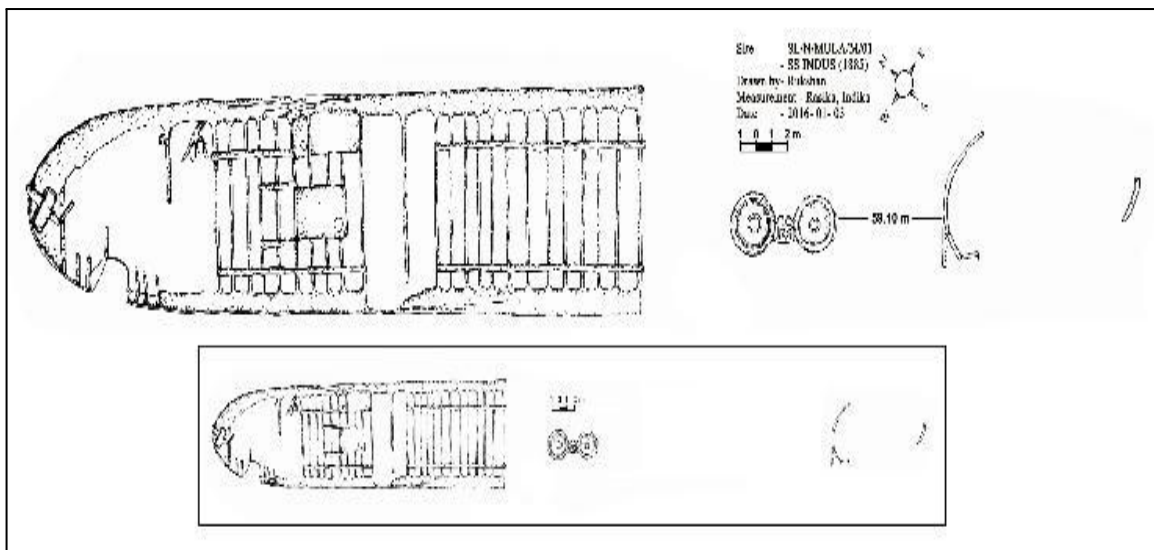
RESEARCH METHODOLOGY

When doing a maritime archeological exploration or a conservation, it's something very common that the MAU studying the previous research records and other sources based on the site area. In addition, studying The Nautical charts related to the region is also done. Further more, regional fishing community and the divers become the main source of media in obtaining information about the other archeological sites and the sunken shipwrecks in the area. As an example, when exploring the site of SS Indus, the usage of the methodologies such as; swim line search and snorkeling were used to find the only sunken shipwreck in the Mullaitivu coastal line; which had been stated in the nautical charts. Although the whole region was examined using the compass baring, there it didn't find any sunken shipwreck. After that unsuccessful attempt, as a result of the interview discussion done with Greshen; who was a local diver in the area of Kokilai, was able to find a region of a sunken steam shipwreck from the facts provided related to the GPS location during the discussion. This site was about 2km away from the site; that had been stated in the Nautical charts at first, it was named as; Mullaitivu Iron wreck by the MAU.

ARCHAEOLOGICAL EXPLORATIONS AND EXCAVATIONS IN THE SITE

1ST EXPLORATION SESSION IN 2013

On August 2013, when the Mullaitivu steam shipwreck was exploring, there hadn't been any clue to guess whether that is SS Indus or not. According to historical facts, the length of the SS Indus was 109.81m (360.41feet) and the width was to be 12.31m (40.4feet) (Fig. 4). However, the length of the surface area where there were remnants of the shipwreck was about 42 meters while the widest place of the shipwreck was about 10.6 meters. These remnants were regularly spreader rite to from the bow sprite to the stern. Due to this fact, it was failed to guess that the explored shipwreck to be SS Indus and the propeller, the propel or shaft, and the Rudder of the ship had not been found. On the surface area of the spread remnants, towards the corner of the stern, two boilers were shown above the sea bed. As there hadn't been any statement of any kind of other steam shipwrecks around this area wasn't found from nautical charts the team of Maritime Archaeologists had the curiosity to find more about this.



As a result, it started researching whether there had been any activity done in the particular area when the war was prevailing at the region. When discussing with the regional fishing community and some of the former members of the LTTE, it was unveiled that; for the necessities of the war, LTTE had cut and taken much of the iron from this shipwreck most of the time. So that, the fact is clear that for the needs of the LTTE organization, they had taken much of the iron which had been raised from the sea bed at the stern section of the ship so, it is clear that, when our team explore this site, much of the parts of the ship which had been raised up from the sea bed; were damaged due to the above-mentioned activities during the war. The bow section which had been rouse up about 5m from the sea bed; and covered by a large number of fishing nets had been interacted very safely. For the exploration activities done during the year 2013 included; surveying remnants in the place, drawing sketch plans, surveying the diameter or the two boilers and unloading some movable artifacts in case of further research. (SS Indus Exploration Report, 2013)

1ST EXCAVATION SESSION IN 2014

On 2014 underwater test excavation project was started in case of identifying whether the steam shipwreck which was called to be “MULATIVU IRONWRECK” was exactly to be “SS INDUS” or not. The two maritime archaeologists, who worked under the Department of Archaeology, were also participated with the project. Before starting the excavations, it was must to remove the fishing nets which were covering the parts of the shipwreck, as the nets were a threat to the divers. At the beginning, it took few days to remove those nets. Those removed parts of the nets were put in to bags and brought back to the sea shore and handed over to the fishing community in the region. There by, it was considered about letting the fisherman re-use the nets which were in the re-usable conditions and informing them about the fact that; the nets would again be re-coiled with the parts of the shipwreck, if they were to let the nets freely in to the sea.

After the above-mentioned activities, the site plan was designed including the surveillances recorded over the revealed parts of the shipwreck which were explored from the seabed. There by, it started the excavation activities related to the project.

Accordingly, the first test excavation pit was selected centering the bow section of the ship and for that a water dredge machine which functions by diesel in a capacity of 7.6 HP; was used. This site was named to be "test pit A", whereas, there it was unable to find any movable artifacts from this site during the excavation; but to continue the excavations to the base of the ship, there it had to remove iron parts which had been decayed and fallen downwards from the upper parts of the bow section of the ship. This "test pit A" was about a 2x2 m area where it had to use sand bag coverage around the pit to establish the banks of the pit to prevent from erosion. Although the excavation was done for a depth of 80 cm, there it revealed none of the movable artifacts.

Test excavation pit B was about 12m away and towards the stern section from the test pit A. There, it unveiled that the surface layer of the area was covered with fine sand, the second layer with pebbles and sea shells and the third and fourth ones completely with sea shells, and decayed iron parts of the ship; involved in creation of the particular pit B area. This was also about 2x2 m area in size. From that, a large amount of movable artifacts was found, and among them; there were some ceramic floor tiles and some copper alloy objects.

Test Excavation pit C was established about 10m away from the test pit B; towards the stern section, and started excavations over that area centering an open place in the ship. Accordingly, when continuing the excavations in the considered area all the attempts taken to seize the erosion of the banks of the excavation become unsuccessful. Meanwhile, due to the completion, it was unable to proceed the excavations up until the base of the shipwreck.

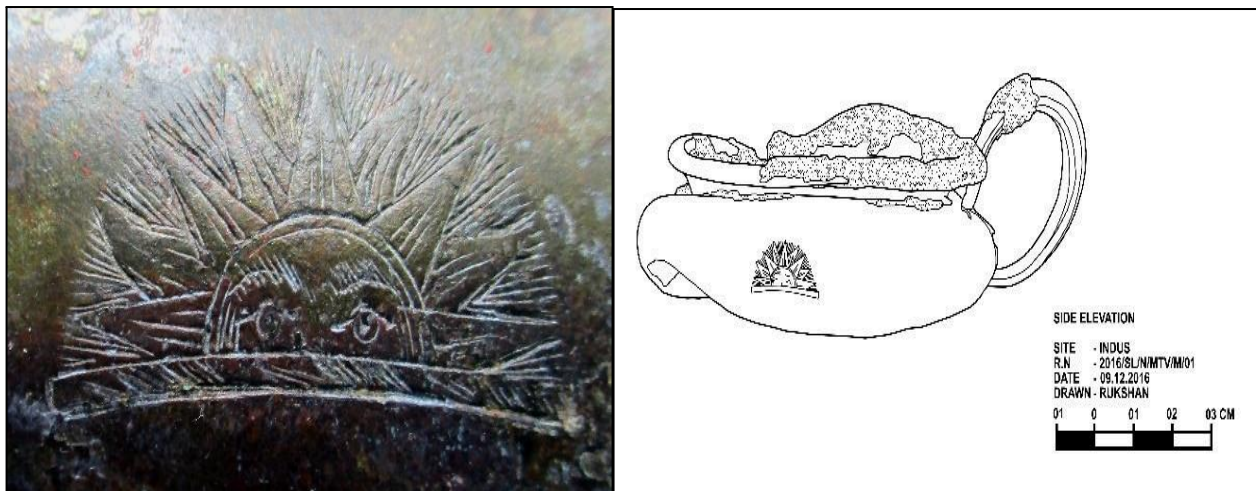
After removing the fine sand layer of this test pit, a layer of some soft material which was light ash in color, was found there and the archaeologists started estimating that it might be a layer of a wheat flour where it was very difficult in getting a sample from that layer, as that particular material got dissolved in the water as soon as it was unveiled. If it was able to conclude that this material was exactly be recommended as SS Indus, because the early records mention that, among the cargo. In the ship there had been wheat flour in the cargo. However, these excavation activities had to be seized without being achieving estimated results, letting the research problem to be remained for the forthcoming years too.

2ND EXPLORATION SESSION IN 2016

During year 2015, there had not any exploration taken place around SS INDUS shipwreck, and on 2016; a project proposal was designed in relation to the re-starting of research excavations around the shipwreck. Due to the rough condition of the sea and low visibility of water in the sea bed, this project which was decided in a short period of time to be held on September, 2016; became a failure. However, there wasn't any detail scale drawing had been prepared yet and in the meantime; was able to take measures to prepare the scale drawings. There were just two days having clear visibility in water and the researchers were able to photograph and video document the site during those two

days. And also, during the project term, from the excavations done on the surface of the ship; there it could identify some ceramic tiles inside a room in the mid ship area. There were tiles in colors; black, red and yellow.

No any favorable fact was found from archaeological site to recommend this shipwreck as SS INDUS. But, as a result of the researches carried on the surface area of the ship, a copper alloy small jar was found as one of the greatest pieces of evidence which could be used to solve the ongoing problem of "SS INDUS's" recognition. In the outer cover of the jar, the symbol of "SUN" was marked (Fig. 5, 6).



Figures 5 (left) & 6 (right): Sun symbol of the P &O company.

This symbol of the "SUN" is the logo of the P&O Company. This 'logo of sun' had also mentioned on the ceramic plates that were investigated from the shipwreck SS RANGOON that was sunken outside Galle harbor (Jayawardhana.D.,2016, pg.315,). That ship was also belonged to the company P&O. Accordingly, this particular evidence was very useful in determining that shipwreck is to be SS Indus; which was also belonging to the company P&O. (SS Indus Exploration Report, 2016,8). So that, no more other maritime archaeological explorations were done on 2016 and MAU had to be satisfied with that much of activities, as there was no much of the time left in the year, as well as due to the bad condition of the sea.

2ND EXCAVATION SESSION IN 2017

During the past years, from all the researches done on this archaeological site which was situated in the Mutativu region, it had been determined that the most favorable month of the year to carry on the diving activities in the region; was the month of June. According to regional fishing community, regional divers and whether reports; MAU team decided that this period of time would be better. So that, MAU worked for carrying out a research excavation project from June 10,2017 up to June 30,2017 in hope of commencing excavations, MAU team settled down at the Mutativu area from

June 13, 2017 onwards. But the condition of the coastal line wasn't as expected. As the nature of the sea was very violent the team had to wait for a few days until the sea becoming calm.

On June 17, 2017; related to the area, where the boilers of the shipwreck were situated close to the port side hull, an excavation was started in a test pit. On June 18th the same procedure was continued. Those excavations were unable to be continued as the nature of the sea, again turned in to violence. However, from this test excavation pit, a huge and strong timber flank could be investigated.

Then, another test pit was subjected to excavations and it was 10m away from the bow area and close to the port side hull. Excavations in the second test pit arrived on from June 21, 2017 up until June 26, 2017. Though visibility in water was effective for the underwater activities, the surface of the sea was not favorable at all. With the aid of two small scale fiber glass fishing boats, the team of the researchers and the water dredge could be transported to the excavation site, but due to the rough nature of the surface of the sea, dripping was often taking place; and the ropes of the anchor broke from time-to-time. However, without being considered about the challenges during the process, for 10 days the excavations continued; but none of any facts investigated during the dives done to a depth of 2.2 m from the surface of water.

From the excavations, a material that is much similar to wheat flour was investigated as it was being the stock of material found in the research on 2013, and a sample of that particular material was brought for further laboratory experiments. In addition, with the removable of the fourth layer, a black colored material was found and it was estimated to be "tea"; which had been one of the major goods in the cargo. Samples from them were also brought for further laboratory experiments. In addition to above facts, except some unidentified metal objects no any considerable artifacts were found from the excavations done in the year 2017 at Mulathivu. Unintentionally, the sea being rough more and more, day-by-day and the speed of the wind becoming increased; due to these unexpected conditions, the team decided to seize the excavations on its way.

3RD EXCAVATION SESSION IN 2019

The MAU of CCF has proposed an underwater archaeological excavation of Mullaitive ship wreck (SS Indus) in 1st September to 30th of October, 2019 and field research has started in second week of September. Firstly, research team of the MAU has removed the fish nets that covered by the parts of the wreck because they are very dangerous and interrupt for the investigations in the site. Removed nets buried in the sea floor of the outer area of shipwreck.

Sea condition and the visibility of the research area was more efficient in this season than the previous research seasons. Therefore, it was helped to the research team to carry out in-detail research on ship building technology. Bow area (northern area) of the ship was re-identified as the stern post of the ship by the new research in 2019 because Northern area of the shipwreck was miss identified as the bow area in 2013 and also unearthed the rudder that buried under the sandy floor while the investigations.

According to the new discoveries of the wreck, our team started to excavate a 4m x 4m test pit where located about 15 m from boilers to the southern. Main objective of the test pit was finding the

hatches of the wreck. Team has unearthed a soft and light ash colour deposited layer (about 60 cm in thickness) after the first sandy layer. And also uncovered a metal part of the wreck that covered by the marine organisms from the west corner of the text pit. We used sand bags to prevent falling down the walls of the text pit. Unfortunately, due to unearthing, a wall part of the ship wreck (140 cm in depth of the text pit) that sloped to the east from the west corner of the text pit, the excavation was stopped (Fig. 7).

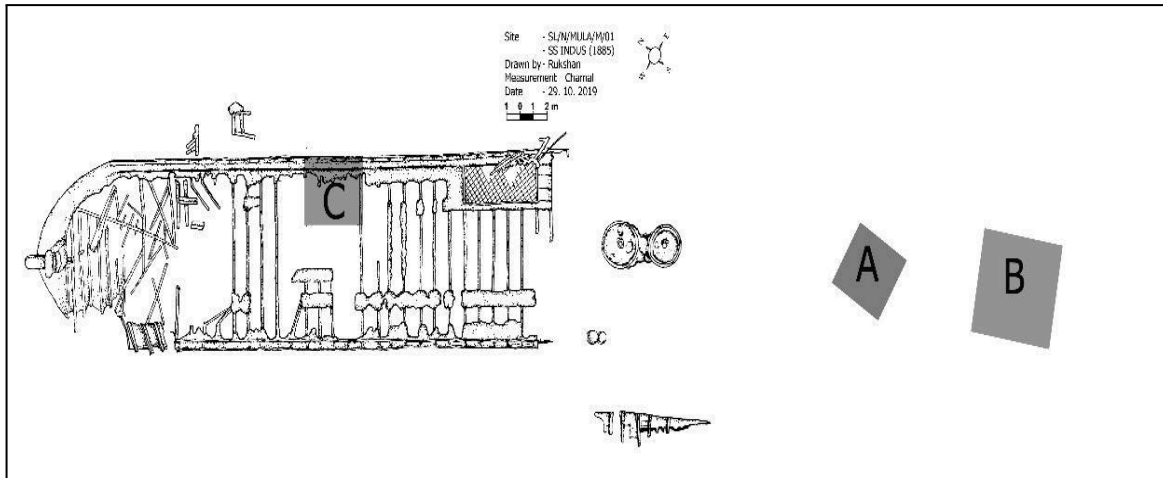


Figure 7: Plan of the SS Indus and excavated pit.

Our team started a new 2x2 m text pit excavation in the stern section of the port side (inner area from the hull). Objective of the text pit was identifying the nature of the depositions of the area. While the excavation, team has unearthed a very dark layer. According to the appearance of the layer team has decided it will be (possible) the decayed tea particles that deposited after sinking the wreck. However, team got a sample from the layer for further lab investigations. Parts of Porcelan, glass, unidentified metal artifacts have found from the pit. The study of letters on above ceramics will be notable evidence to prove the ship wreck as SS Indus (Fig. 8).

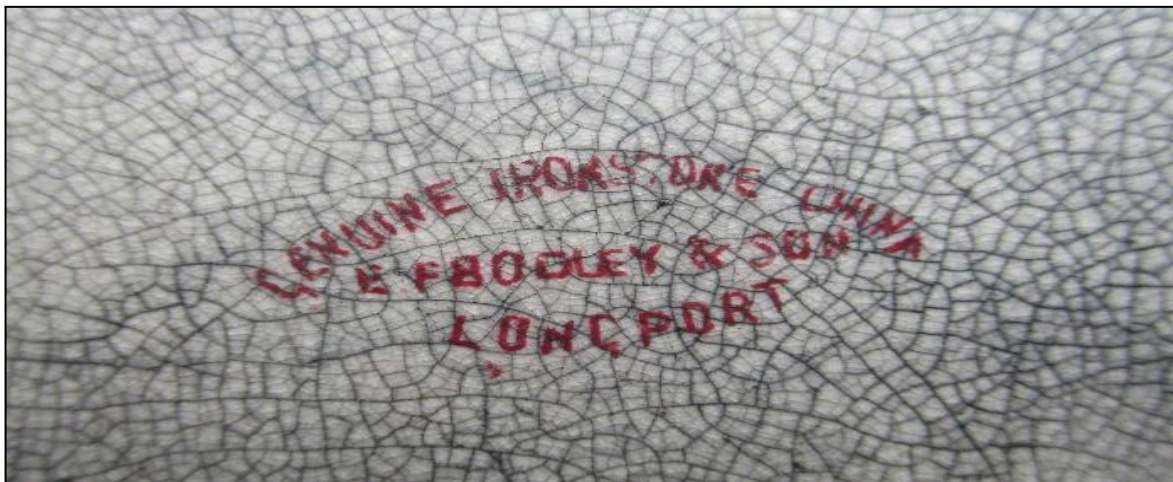


Figure 8: Letters on a piece of porcelain. (MAU, 2019).

“Genuine Ironstone China EF Bodley and son - Long Port” has written on the porcelain base. It was a private pottery company based in Long port, Ireland. Pioneer of the company was Edward Fisher Bodley. He started a new porcelain factory in Long Port, Newjersy. However, after the death of Bodley, it has closed in 1888 (A-Z of stoke- on-Trent Potters, Viewed on 30th Of October <https://collections.tepapa.govt.nz/agent/26184>).

RESULTS ANALYSIS

According to the ancient sources which demonstrates the ancient story, how the SS INDUS sunken, we can't estimate that these stone pillars were unloaded. According to the assumptions of Gaur, the artifacts which are related to it, can be found in between Calcutta and London archival. If such artifact were in the ship, there had no good to atmosphere to unload them during the period of sinking (Nandadasa, 2014, pg.939). Even though it happened like that, the information that the regional community gave about the interference of the LTTE Organization regarding the ship remains doubtful in the monument when the shipwreck was first discovered on 2013. Is it only the iron parts connected to the bow that they removed after cutting from the ship? There are no evidences to prove their secrets as this is a secret terrorist organization. We can have optimistic hopes regarding unloading the stone sculptures, if they have been stored in the main hatches or ships lower deck. The reason for this is that first nailing the anchor Fuke allows the water and sank to drain inside it. On the other hand, due to the progression of the monsoonal condition because of the sinking; it may fill with sand during a few terms.

Apart from the results got from the sample which assumes to be wheat and tea, from the excavations done around the ship, the small aluminum pot which carries the logo of the sun provide the major fact; to clearly assume that this ship is steam liner SS INDUS of P&O company. Apart from this, without finding any evidence of any shipwreck in this area, proves this assumption.

CONCLUSION

With the recognition of the SS INDUS for the first time in 2013, the annual archaeological researches and excavation projects regarding it, were not performed a successful result. The lack of trained human resources regarding marine archaeology, the limitation of the time period to activate the project, the lack of instant and physical resources, and the rough condition which sustained in the area of shipwreck were the major reasons led towards the failure of it.

PROPOSALS

The ancient stories that the SS INDUS is hiding in the sea bed are marvelous. According the Sri Lankan Law Circle SS INDUS is called to be an Underwater heritage of Sri Lankan as it is sunken in Sri Lankan waters.

As the nets of the fishing community tore's often in the area of the shipwreck, they look at it in antagonistic feeling. There is a huge force by the regional community telling that to stop explosive fishing activities which are done annually. Dynamite had been exploded in the area some weeks

before the commencement of the 2017 and 2019 test excavation. The monument can't be protected only by making the laws strict. By recognizing it as a treated marine archaeological center, international cooperation must have a quick interference on it. The prevailing amount of data must be protected by intruding a long-term project rather than a short term project.

Acknowledgments

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Biographies

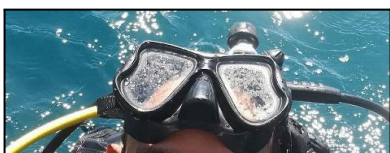


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