

Effective Management of Archaeological and Historical Shipwreck Sites in the Red Sea, Egypt

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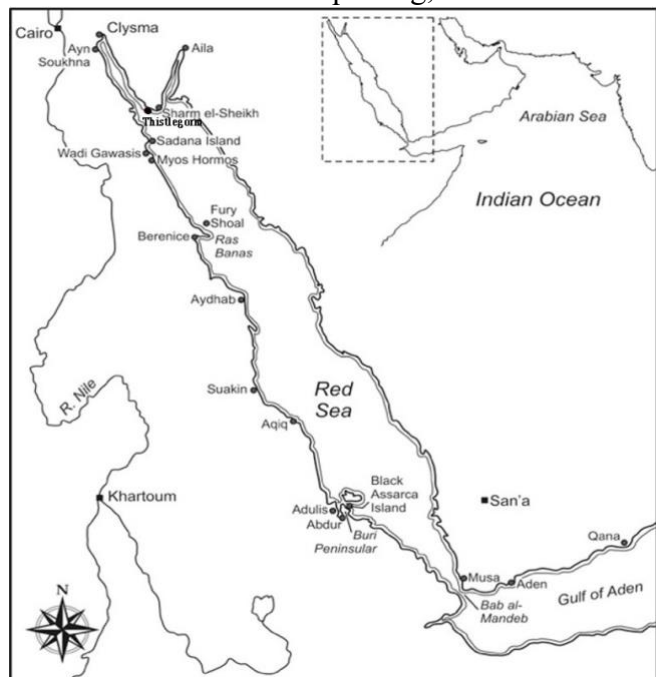
Introduction:

Ships have been anthropomorphized and evolved alongside mankind, often taking a life of their own; even in death, a ship's demise is as dramatic as that of its flesh and bone crew. Akin to its makers, a ship's death can be followed by its resurrection via explorers, filmmakers, musicians, story tellers, divers, maritime archaeologists, and museums. In short, a ship's life does not cease just because it slips beneath the seas; instead, it becomes a valuable time capsule with its own stories to share with the general public and sights of attraction for sports divers.

Prior to recreational diving, the nearly impenetrable depths of the waters initiated in situ preservation for many UCH sites; however, instead of archaeologists being provided ample funding to enable to investigate a site, the increased popularity and availability of recreational diving implicates it is more often a sports diver, with possible looting intent, who happens upon a wreck rather than an altruistic archaeologist.

While deep sea wrecks are largely protected by depths which foster a preservative resting place, more shallow wrecks have become a destination for divers and a target for looters, both of which may also compromise the archaeological integrity of unmanaged sites. (Brockell, 2020; NOAA Office of General Counsel, 2012). The preservation created by a shipwreck's physical inaccessibility once extended to nearly all submerged Underwater Cultural Heritage (UCH) sites; however, in the 1940's, Jacques Cousteau's invention of the Aqualung, Self-Contained Underwater Breathing Apparatus (SCUBA), enabled the penetration of once prohibitive depths by an adventurous person; Cousteau would also go on to discover the World War II iconic shipwreck, the Thistlegorm in 1955 and spur a public interest maritime exploration (Bass, 2012 p.3-4).

As diving evolved beyond military use to commercial practice and then to recreational use, an international economy and community has prospered around dive travel. Unsurprisingly, several of the globe's premiere diving sites, such as the Thistlegorm in Egypt, and Chuuk Lagoon, in the central Pacific, are UCH sites which attract many visitors a year (Jeffery, 2004; Schofield, 2019). It is estimated that the Thistlegorm alone brings in 5 million Euros of revenue a year and attracts thousands of visitors each year to the Red Sea of Egypt (Brown et al., 2020; Kean, 2009: p 49). When managed effectively, these UCH sites can be intellectually, culturally, and



Map of the Red Sea (Blue, 2012; p.6246)

financially enriching for the surrounding community.

Seemingly, the lack of oversight, regulation, and education of divers regarding archaeological and historic wrecks, at risk for a litany of issues (Edney, 2016). Active threats to preservation efforts include: looting, destruction of archaeological integrity, increased decomposition of the wrecks, and their contents (Abd-el-Maguid, 2012; Campbell, 2013; Edney, 2016).

The importance of developing and implementing sustainable management plans to protect and promote public accessibility to ancient and historic wrecks is crucial. For the purpose of this study, suggestions for effective site plan management will be developed by evaluating three at-risk UCH wreck sites of the Red Sea: the Roman wreck site at Fury Shoals, the 18th century Ottoman merchant ship of Sadana Island, and the Thistlegorm WWII shipwreck.

The expansive breadth of the Egypt's involvement in trade provides a unique opportunity to discover, explore, study, document, preserve, and display heritage sites from a diverse and wide-ranging spectrum of cultures and traditions. Three sites offer various circumstances to further illustrate a comprehensive and cohesive management plan (Blue et al., 2012; Kean, 2009; Ward, 2001).

Aims and Objectives:

Increased recreational diving combined with international travel, begets the question: how can underwater cultural heritage sites, specifically archaeological and historic shipwrecks, be identified, preserved, and promoted to ensure a sustainable availability and cultural benefit to the public? Using three UCH sites in the Red Sea, of varying dates and individual risks, this research strives to create sustainable project plans and evaluate the understanding and reception of sports divers to protecting and enjoying Underwater Cultural Heritage.



Fury Shoals Early Roman Amphora

So, at this point in time, UNESCO's recommendation for both land and underwater cultural heritage sites, which are not facing immediate threats, is a procedure known as in situ preservation. The 2001 Convention for the Protection of the Underwater Cultural Heritage, ratified by Egypt, concedes "the preservation of in situ underwater cultural heritage sites shall be considered as the first option before allowing or engaging in any activities directed at this heritage." (UNESCO Convention 2001). While in situ

preservation is not a long-term solution, it is an immediate and affordable method which realistically addresses the issue of limited funding and ongoing degradation caused by the elements of nature and human interference.

By comparing three separate UCH sites, all with different traits, conditions and circumstances, an effective guide for creating project management plans for UCH can be developed. Research reiterates the importance of considering diver personalities, ethnicities, habits, and education to better understand and rectify issues caused by divers such as graffiti, moving artefacts, looting, or damaging the wreck itself (Edney, 2016; McKinnon, 2015).



The Thistlegorm

Research Methodology:

In addition to fieldwork analysis, discussions with divers and questionnaires regarding their knowledge of UCH will be essential and will allow for a comprehensive of the information needing to be disseminated to sports divers via social media, seminars, and SCUBA specialty courses.

Creating an encompassing management plan to address the issues and minimize the risks these sites face will ensure the archaeological integrity is minimally compromised and sites remain viable for the public and future divers to enjoy.

The study will aim to use a central dive shop near each site to issue questionnaires regarding divers' backgrounds in the aforementioned as well as their knowledge of UCH. Outreach with the dive community will be integral in establishing plan management as well as raising awareness on procedures divers, and more importantly local guides, can take to report, preserve, and enjoy UCH. In addition to outreach with the local Red Sea dive community, social media will be used to disseminate photographs, videos, and information which captivates audiences as well as educates the public as to the benefits, risks, and methods to preserve and enjoy UCH. The Diving community is active on social media as well as passionate about preserving the environment they enjoy; with effective organization, collaboration, and distribution of content can lead to a local as well as an international audience. While government involvement is central for any effective plan management, the circumstances in Egypt encourage a bottom-up approach from the public to promote government action.

- § Case study to examine numbers of divers on the sites, diver experience level, diving technique, knowledge of UCH, willingness to pay fees.

- § Field examination of the three sites to be able to determine suggestions for project management and to take photos for social media awareness.
- § Discussion with local dive shops about their opinions and knowledge towards preservation.
- § Questionnaire for divers diving the Thistlegorm regarding their knowledge and support of UCH
- § Publish photos and videos to raise awareness of UCH on social media.
- § Collaborate with large platforms to reach target audience: SSI, PADI, etc...
- § Comparative research of dive plans in Micronesia, Philippines, and other UCH historic wreck sites.

Chapter Outline

Introduction

- a. Economic Benefit of Egyptian Marine Tourism and behavior/characteristics of Sports Divers
- b. Analysis of the dive economy and financial influence on developing countries
- d. Divers as Tourists
- e. Ethnic, education level, and income statistics of divers
- f. UCH becoming a trend in tourism

Chapter 1:

2001 UNESCO convention and the push for preservation of UCH-Situ Preservation and Public Accessibility for UCH sites

- a. 2001 UNESCO convention promoting in situ preservation and Public Accessibility for UCH sites
- b. Egypt ratified the agreement
- c. Decade of Oceans campaign with UNESCO to promote marine sustainability
- d. International examples of developing Tourism based around UCH
 - i. Underwater museum in Baeia
 - ii. Wasa In Sweden
 - iii. Basuanga Bay, Philippines
 - iv. Liberty wreck, Indonesia

v. Great Lakes wrecks in the US

Chapter 2:

Fury Shoals Roman Wreck

- a. History/ Description
 - i. Roman Era wreck
 - ii. Exact date unknown
 - iii. Fury Shoals location
 - iv. 35-45 meters
- b. Threats to the site:
 - i. Site has been badly damaged and looted
 - ii. Amphorae stolen at increasing rate
 - iii. No management plan in place
 - iv. Pollution
- c. Suggestions for management:
 - i. Further Information pending field study
 - ii. Excavation to collect and preserve artefacts
 - iii. Replicas replace original artefacts.

Chapter 3:

The 18th Century Sadana Island Shipwreck

- a. History/description of the Site:
 - i. 1760's Ottoman merchant ship
 - ii. Excavation by INA and SCA from 1995-98
 - iii. 27-45 meters water
 - iv. Merchant ship carrying Qing dynasty porcelain
 - v. Offers information to better understand Ottoman history of trade and shipbuilding and relations with India and China
- b. Threats:
 - i. Active looting
 - ii. Volatile weather making excavations dangerous
 - iii. Permit issues for excavations and bureaucratic obstacles
 - iv. pollution

- c. Suggestions for management:
 - i. Funded excavation to extract artefacts at risk for threat
 - ii. UCH museum created for divers to enjoy
 - iii. Replicas replace original items
 - iv. Diving fees
 - v. Transparent management of UCH
 - vi. Plastic free push

Chapter 4:

The WWII Thistlegorm Shipwreck

- a. History/description of the Site:
 - i. British refitted commercial vessel during World War Two
 - ii. Sunk off of Sinai, 1941, by German Luftwaffe Air Raid
 - iii. 9 fatalities, serves as a monument to North African theatre during WW2
 - iv. Discovered by Cousteau 1955
 - v. Premiere diving spot with thousands of visitors a year
 - vi. Recent photogrammetric scanning and information online
 - vii. Project Thistlegorm
- b. Threats:
 - i. Popular dive site
 - ii. Inexperienced divers causing damage
 - iii. Bad behavior exhibited by dive guides
 - iv. Mooring method of dive boats
 - v. Cables attached to the ship rather than moorings
 - vi. Looting
 - vii. pollution
- c. Suggestions for management:
 - i. Education of dive guides
 - ii. Plastic Free push in the area
 - iii. Increase diving fees in the area
 - iv. Installation of appropriate and durable moorings for dive boats
 - v. UCH dive course created

vi. Limitations on divers allowed per day

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