

A Case for a Centralized Hub for Aeronautical Archaeology

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ABSTRACT

Presently, the dissemination of research findings, methodologies, and best practices within the sub-discipline of aeronautical archaeology occurs in a fragmented manner. This paper argues for the establishment of an aeronautical archaeology association, or sub-committee, that would serve as a centralized hub of information and foster collaborative research. Proposals are offered on a way forward for the sub-discipline in order to strengthen methodological foundations and advocate for the protection and preservation of aviation cultural heritage on a global scale.

Introduction

Aeronautical archaeology, as defined by Fix (2011), Shanahan (2018), and others, has witnessed a surge of interest and activity in recent decades. This increased attention is evidenced by a myriad of organizations and individuals engaged in aircraft wreck site investigations and research on a global scale. The aim of this paper is to help familiarize archaeologists, heritage professionals, and others with the current state of aeronautical archaeology as a sub-discipline, examine existing challenges with particular focus on information sharing, and propose future direction for research, cooperation, and public outreach.

The inaugural International Conference on Aviation Archaeology and Heritage (ICAAH), held in Malta in 2017, was jointly organized by the University of Malta and the Flying Heritage & Combat Armor Museum. The conference included 22 presentations by archaeologists and heritage professionals from 10 countries including Croatia, England, Finland, Germany, Italy, Malta, Netherlands, Scotland, Sweden, and the United States (US). The conference proceedings (Gambin and Hunt 2020) encompassed a wide range of topics, including artifact conservation, museum collections and preservation, archaeological site investigation, and general aviation heritage discourse. Overall, the event was a successful international exchange of knowledge in the field of aeronautical archaeology and heritage.

Building on the success of the 2017 conference, Aviation Cultures Conference in collaboration with the University of Southern Queensland organized the Second ICAAH hosted online in November 2024. The conference program includes 21 presentations delivered by archaeologists and heritage professionals from eight (8) countries including Australia, Canada, Hong Kong, Malta, Netherlands, Papua New Guinea, Slovenia, and the US. The decision to hold the second conference online was motivated by the desire to continue the conference series, which had not convened since 2017. This format allowed for broader

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participation and inclusion of presenters from diverse geographic regions. The organizers intend to publish the proceedings of the conference and explore the possibility of future in-person meetings.

A Brief View of the Current State of Aeronautical Archaeology

Since the Second World War (WWII), aircraft wrecks have drawn the attention of salvors, wreck enthusiasts, aviation museum personnel, among others, with archaeological inquiry remaining relatively limited until the 1990s. The rise of aeronautical archaeology has been discussed elsewhere⁴, so the following will focus on key developments since the inaugural ICAAH in 2017.

It is essential to consider how research and fieldwork results are being shared between peers and to broader audiences. Since the conference in 2017, a great deal of scholarly activity has occurred in the form of symposia, conference papers, online blogs, graduate theses and dissertations, and publications within academic journals and elsewhere. While the following is illustrative of the types of academic activity occurring within the field, it certainly does not represent the full breadth of academic discourse since that time.

As a primary example, we can examine the conference papers being presented at the Society for Historical Archaeology's (SHA) annual Conference on Historical and Underwater Archaeology. Between 2018 and 2024, a total of 46 papers discussed archaeological investigations of aircraft wrecks. Notably, 25 of those were presented at the 2020 conference in Boston, where a dedicated symposium "*Strides Toward Standard Methodologies in Aeronautical Archaeology*" was held. Several contributors subsequently published their papers in an edited volume of the same name (Whitehead and Lickliter-Mundon 2023) which predominantly focused on studies conducted in the U.S., Canada, and those supporting Defense POW/MIA Accounting Agency (DPAA) projects abroad. It is also noteworthy, that of the 46 papers presented at the SHA Conference since 2018, 18 involved investigations conducted by the DPAA and its strategic partners in their ongoing efforts to recover missing U.S. military personnel. Papers by students and faculty of East Carolina University (ECU) have comprised 14 of the 46 presentations since 2018, which is unsurprising given DPAA's strategic partnership with ECU. This partnership, one of many the DPAA has initialized, has uniquely positioned ECU's maritime archaeology program to consistently train students in aircraft site investigation techniques over the past half-decade or so.

It is also important to acknowledge the scholarly contributions of master's and doctoral students involved in archaeological investigations of aircraft wrecks and other aeronautical heritage studies. A comprehensive search of academic databases such as ProQuest and Google Scholar revealed a total of nine master's theses and four doctoral dissertations completed over the past six years. Of these, seven focus on the investigation and analysis of underwater aircraft wreck sites (Mauro 2018; Lickliter-Mundon 2018; Whitehead 2019; Adamson 2020; Burgess 2021; Bush 2024; Smith 2024), two on terrestrial wrecks and associated artifacts (Ishii 2023; Lawson 2024), and four on archaeological landscapes and predictive modelling (Sprague 2018; Winterton 2023; Kranda 2023; Schaefer 2024). It is also notable that five of the 13 theses and dissertations discussed here originated from ECU, further emphasizing the significance of the DPAA partnership in fostering scholarly work in aeronautical archaeology at the institution.

The sub-discipline's trajectory is further evidenced by the increasing frequency of lectures and presentations outside of traditional academic settings. For instance, the Aviation Cultures Conference has

⁴ See Whitehead (2023) for an overview of the development of the sub-discipline

hosted two online lecture series in 2021 and 2024, featuring invited speakers who discussed both terrestrial and underwater aircraft sites located in Australia, Britain, China, Saipan, and the US. These events provided an opportunity for broader discussion of aeronautical archaeology. Similarly, the Nautical Archaeology Society, based in Britain, has now hosted several aeronautical archaeology-themed short courses, the most recent being 'Aviation Archaeology in the Maritime Environment' held at the Fleet Air Arm Museum on November 9-10, 2024. It is evident that the sub-discipline has captured the interest of both heritage professionals and the general public. Recently, the field has been the subject of popular magazine articles within *American Archaeology* (2020) and *Air & Space Quarterly* (2024), often focusing on the ongoing discourse between professional archaeologists and aircraft wreck enthusiasts. Popular documentaries produced by National Geographic have highlighted the archaeological investigations of aircraft wrecks, featuring the work of professional archaeologists on submerged sites. A recent example is *The Real Red Tails* (2024) which featured the archaeological investigation of a Tuskegee Airman's P-39 Airacobra submerged in Lake Huron, Michigan.

Wreck site investigations are being published in various academic journals, such as those focusing on remote sensing and forensic science. Recent examples include Grządziel's (2022) study of remote sensing techniques to identify submerged aircraft in the Baltic Sea, Poland, and Masters and Osgood's (2021) forensic investigations of terrestrial military aircraft in the United Kingdom (UK). However, the *International Journal of Nautical Archaeology (IJNA)* and the *Journal of Maritime Archaeology (JMA)* appear to be particularly prominent venues for the publication of aeronautical archaeological research, with four and six articles since 2017, respectively. Those published within *IJNA* include studies on the naval battle between USS *Emmons* and Japanese Kamikaze units (Katagiri et al 2024), National Oceanic and Atmospheric Administration (NOAA) operations in the Pacific Basin (Hartmeyer et al 2024), the recovery of a submerged Fairey Barracuda in the UK (Byford-Bates et al 2023), and the potential for the presence of wreckage from the airship R.38/SZR-2 in the Humber Estuary, UK (Firth 2024). The articles published in *JMA* primarily focus on WWII-era aircraft, with studies conducted in Truk Lagoon (Moline et al 2024), Saipan (Lickliter-Mundon et al 2018; Pruitt and McKinnon 2023), and aircraft associated with the USS *Independence*, which was used during the Bikini atomic bomb testing and was later scuttled off the coast of California (Delgado et al 2018). One article focuses on DPAA's strategic partnerships program (Mires et al 2024), and lastly, an annotated bibliography of WWII underwater archaeological studies including analyses of general trends within the discipline (McKinnon 2024), which is discussed further below.

McKinnon's (2024) analysis of four decades of WWII underwater archaeology publications tracked several categories, including first author gender, heritage type, region, and primary focus. The study revealed some interesting trends, here we focus on her heritage type category which differentiated studies on aircraft, ships, and other submerged material. The analysis included a review of 263 publications that are publicly, and widely, available such as journals, books, chapters, and theses; gray literature was not included. The study determined WWII aircraft were the primary focus in the 1990s (66%); however, that focus declined to 36% in the 2000s, 20% in the 2010s, and 26% from 2020 to February 2024. This percent change is interesting; however, it is likely influenced by the significant increase in overall publications over those decades, rising from 11 in the 1990s, to 38 in the 2000s, 134 in the 2010s, and 80 from 2020 to February 2024. While McKinnon's study provides valuable insights, it is important to acknowledge, as she does, that the inclusion of gray literature, such as reports from commercial archaeology firms or publications not readily accessible through academic search engines, could significantly impact the results. A similar study, focused on aeronautical archaeology, could represent a crucial contribution to the field,

and by building upon McKinnon's categories and incorporating additional variables such as aircraft era, type (commercial, civilian, military), institutional involvement, etc., future studies can delve deeper into the nuances of the field.

Problem Statement

As a core component of the Second ICAAH, this white paper was developed to explore the potential benefits of establishing a community-driven aeronautical archaeology sub-committee to advance the discipline by serving as a centralized hub of information, and more. To facilitate discussion throughout the conference, the conveners developed the following problem statement:

Despite growing engagement within the field of aeronautical archaeology, there is no central hub for information exchange and academic discourse, such as a dedicated association or sub-committee, and journal. The establishment of same would enable increased collaboration within the field, and potentially enable increased outreach and engagement with the general community.