

commitment of Gert Normann Andersen, founder of JD-Contracor A/S, the leading Danish underwater contractor, and the expert on the site. Gert made the book possible, dedicating his research vessel to a project which he has long wished to see completed.

The scale of the battlefield emphasizes the value of modern sensors. It is impossible to see large wrecks, like the big armoured ships at Jutland, in their entirety, but sidescan and the latest multi-beam sonar has revolutionized the ability of archaeologists to locate and analyse wrecks on the seafloor, while ROVs reduce the risk and improve the endurance of divers. McCartney uses his own 17-year connection with the battlefield to reflect on the impact these changes have had on his ability to understand the ships and their setting.

The battlefield was first studied in 1920, when Captain John Harper RN located the wreck of HMS *Invincible* in order to reconcile the navigational records of the Grand Fleet and the Battlecruiser fleet, which had been operating separately until shortly before the ship sank. McCartney worked from Harper's charts, provided by a grandson of Lord Jellicoe, the British Commander in Chief. These proved to be remarkably accurate, given that both fleets had steamed for many hours without astral fixes, recording their positions by dead reckoning. Other large ships have been found and plundered by illicit salvage operators, researchers and navies. In 2015 Andersen hired McCartney, who had been diving on the site for more than decade, as his deputy to conduct the first full survey to locate and record the wrecks.

After a brief overview of the battle McCartney examines each of the major wrecks in sequence, bunching the destroyers into two groups. The very first, HMS *Indefatigable*, demonstrates the value of the exercise. McCartney's analysis of the wreck explains the catastrophic explosion which destroyed the ship, reconciling eye-witness testimony, images and archival records. The ship was broken in two by the explosion of cordite propellant in an after heavy-gun magazine, an explosion which generated a massive pressure-wave which killed everyone inside the hull. The only two survivors had been stationed in the forward spotting-top. The ship then sank in two separate stages; as the bow rolled over, the forward magazine also exploded. The multi-beam survey revealed that wreckage was spread across hundreds of square metres. In the next loss, HMS *Queen Mary*, the stern section carried on steaming ahead after the bow sank, creating problems with timings which this book has reconciled.

By combining sonar and visual images, ship's plans and even an inspection of a contemporary armoured cruiser, it has been possible to piece together the cause of loss in most cases. On the British side five big armoured ships were destroyed by catastrophic magazine explosions, in three cases due to poor safety procedures, in two cases due to outdated design. These ships accounted for almost all the British casualties.

A German battleship SMS *Pommern* also exploded, killing the entire crew. The wreckage is the most widely dispersed of all the ships.

This crisply written book, clearly aimed at a broad audience, offers a unique case study of how 21st-century techniques can make sense of a very large sea-battle, and examine the individual wrecks. This is a significant contribution to our understanding of the battle, the detailed causation of individual ship losses, and the problems of recording large-scale maritime events. Sonar images and underwater photographs show that the ships are deteriorating fast; the lightly built destroyers have become increasingly spectral, especially after being ripped apart by scrap-merchants. Propellers have been cut off; one from *Indefatigable* turned up recently in a Dutch scrapyard. Both ships and battlefield are completely unprotected.

Since going to press McCartney and the Danish research team have located and filmed the wreck of HMS *Warrior*, which foundered the following day, lying upside-down some 20 miles from the position John Harper had estimated back in 1920 (<http://www.dailymail.co.uk/news/article-3796350/The-final-missing-ship-Battle-Jutland-sea-bed-100-years-devastating-WWI-clash-killed-9-000-sailors-36-hours.html>). It should be possible to determine the cause of her loss. The project is complete.

This beautifully produced book has made a major contribution to our understanding of the battle, adding archaeological rigour to events usually discussed in terms of chance, human error and uncertainty. Old myths have been dispatched, fake photographs exposed, and the fog of war lifted. Finally this is a critically timely project; by the time the next centenary comes round most of the evidence will have gone, a victim of decay or plunder. In an attempt to reduce the threat to the wrecks their precise locations have not been given in the book, a sad but necessary comment on human nature, and the incapacity of four governments (those of the combatants, and the two countries within whose EEZs the site falls) to do anything to secure them.

ANDREW LAMBERT  
*War Studies, Kings College London*

### **The Social and Economic Benefits of Marine and Maritime Cultural Heritage: towards greater accessibility and effective management**

ANTONY FIRTH

62pp., 9 colour illustrations, Honor Frost Foundation, 2015, free download, ISBN 978-0993383205

The United Kingdom, like most countries in the world, has a very diverse and important marine and maritime

cultural heritage, offshore as well as on land, which generates understanding of the past and valuable public appreciation and support in the present. A perfect example to illustrate the importance of the UK's marine and maritime cultural heritage (and of marine and maritime heritage in general) is the Sutton Hoo ship-burial site. The archaeological site demonstrates quite clearly the vital role of maritime connections in the Anglo Saxon period, and the artefacts from the site are now a centerpiece of the British Museum. Nevertheless, marine and maritime cultural heritage does not receive adequate attention and is even absent from debates and from policy (in the UK but in many other countries as well) largely due to lack of awareness, but also due to the related lack of studies on its social and economic benefits. Such studies are increasingly available for heritage on land, and for the marine environment, but are rare for marine and maritime heritage.

This publication is a very strong and thoroughly underpinned and well-illustrated plea to experts of marine and maritime heritage to direct much greater attention to document and study the social and economic benefits of marine and maritime cultural heritage. After a sharp analysis which sets the scene in the introduction, two basic questions are answered: Who can benefit? And how can benefits be identified? The illustrations on pp.16 and 29 are very helpful. From p.28 onwards a stimulating discussion follows on ten carefully selected topics: participants, visitors, inhabitants, ecosystem services, wellbeing, making it count, engaging in debate, joining up, stimulating research, enabling. The text ends with a conclusion that contains four practical steps to be taken. The report contains at the end a list of references and an appendix presenting UK and European policy relating to the social and economic benefits of cultural heritage and the maritime environment.

'Marine and maritime heritage' is deliberately and quite rightly chosen above 'underwater cultural heritage/nautical archaeology' or 'continental-shelf prehistoric research' to allow the joining-up of intimately interrelated heritage assets, and by achieving this to spread the consideration of the benefits beyond civil servants involved in designation of wrecks and divers enjoying diving on shipwrecks.

This is a publication that everyone concerned with the wellbeing of marine and maritime heritage should carefully read and try to put into practice. In relation to sustainable development more and more international agreement is growing that culture should be placed at the heart (as a driver and enabler) of Sustainable Development Policies as stated in the Hangzhou declaration (May 2013). That means that culture should, in fact, be considered as a fourth pillar of sustainability and not merely as a component of Environment, Economy or Society, as is mostly done now. This would make the case for the benefits of marine and maritime heritage even stronger.

Many people are indeed attracted to watery environments for leisure's sake. Let us take advantage of the huge numbers passing their holidays at sea, on the coast or along rivers to spread information and by doing this to raise awareness and improve accessibility. This publication makes a thorough analysis of the general situation marine and maritime heritage is confronted with: a fantastic legacy but undervalued. The booklet not only analyses the situation but also explores remedies to redress this imbalance. I hope that many people concerned with this fantastic heritage get the opportunity to read this publication and find the means and inspiration to put (some of) the suggested solutions into practice and thus gather much-needed data and information.

MARNIX PIETERS

*Flanders Heritage Agency, Brussels*

### **HMS *Hampshire*: a century of myths and mysteries unravelled**

JAMES IRVINE, BRIAN BUDGE, JUDE CALLISTER, KEVIN HEATH, ANDREW HOLLINRAKE, ISSY GRIEVE, KEITH JOHNSON, NEIL KERMODE, MICHAEL LOWREY, TOM MUIR, EMILY TURTON and BEN WADE

120pp., over 100 b&w illustrations, Orkney Heritage Society, 2016, £25 + p&p, ISBN 978-0953594573

This short book is a compilation of essays by a number of Orcadian and international writers on topics surrounding the loss of HMS *Hampshire* to a mine off Orkney in 1916 and subsequent investigations of what happened. The opening chapters comprehensively detail the circumstances that led to the loss of the ship, and are particularly informative on issues relating to the German mining offensive and the nature of Kitchener's mission to Russia. The book then turns its attention to the sinking of *Hampshire* itself, rescue efforts made and the stories of the few survivors who made it onto life rafts. The attempts to keep the disaster quiet through censorship, and even intimidation of the local populace, is also given full airing; a topic which usually does not receive attention. Further chapters provide biographical details of the few survivors and many of the casualties.

The final chapters cover the legacy of the loss of *Hampshire* up to the present day. This includes a chapter on the building and subsequent restoration of the Kitchener memorial (the proceeds from this book will go to the Kitchener Memorial Refurbishment Project). A chapter also covers the history of the wreck-site itself, through illegal salvage to recent geophysical and diving surveys, featuring some nice