

Reviews

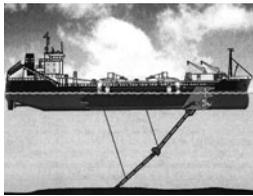
New Book Chronicle

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The shipwreck of time

MATTHEW E. KEITH (ed.). *Site formation processes of submerged shipwrecks*. 2016. ix+276 pages, numerous b&w illustrations, 10 tables. Gainesville: University Press of Florida; 978-0-8130-6162-7 hardback £73.95.

SEAN A. KINGSLEY. *Fishing and shipwreck heritage: marine archaeology's greatest threat?* 2016. xvii+152 pages, several b&w illustrations. London & New York: Bloomsbury; 978-1-47257-362-5 hardback £45.



For this issue of New Book Chronicle, we don lifejackets and head out on, and under, the high seas to review recent volumes on aspects of maritime and under

water archaeology. Along the way are tales of pirates and the odd Sherman tank, but we set sail with *Site formation processes of submerged shipwrecks*, edited by MATTHEW KEITH. The Introduction, by Oxley and Keith, outlines the development of site formation theory in maritime archaeology, and flags the foundational work of Keith Muckelroy, as summarised through his flow diagram of the sequence of cultural and environmental processes at work between a wrecking event and archaeological investigation. This model features strongly not only in the following chapters, but in every one of the volumes considered below.

Following the Introduction, the 10 papers, plus a short Conclusion, are grouped into three sections: 'Natural processes', 'Cultural processes' and 'Site formation and heritage management'. The first includes contributions on various natural processes affecting site formation. Ford *et al.* present case studies of wrecks in riverine environments in Oklahoma and New York, showing how dynamic river systems cycle through phases of deposition and erosion, burying and exposing wrecks. They demonstrate that it is not just the types of processes that determine if

and how wrecks are preserved, but also the order in which they occur. The authors' recommendation for archaeologists to work with other specialists (in this case, geoscientists) to maximise the return on scarce research funds, and to improve one another's results, is a motif that runs through many of the contributions. Moving on from riverine environments, the other papers in this section focus on natural processes in marine contexts, including sedimentation, scour, corrosion and the degradation of wood as a result of shipworms and bacterial attack.

The section on 'Site formation and heritage management' includes Oxley's overview of the origins and evolution of the research on, and policies for, the protection of wrecks by English Heritage (now Historic England). This includes desk-based and field assessment, monitoring and mapping projects, and working with ecologists to create an inventory of the flora and fauna around wrecks. He also discusses the Aggregates Levy Sustainability Fund "as a model of innovative heritage management involving public and private partnership to support the strategic management of, and guidance upon, resources of benefit to all sectors" (p. 224). Also in this section, Warren provides a paper on the acoustic locationing of Second World War shipwrecks in the Gulf of Mexico, and Church presents the 'Equation of site distribution', a mathematical formula for establishing the expected area of the spread of material from a shipwreck given the length of the vessel and the depth of water in which it sank. This is exemplified through the case study of the *Robert E. Lee* passenger freighter and the German submarine U-166; the latter torpedoed and sank the former, before being sunk by a depth charge from a US naval escort.

Finally, the section on 'Cultural processes' includes a valuable overview by Evans and Firth of the effects of development projects on maritime archaeology. They consider the wide and growing range of the human activities affecting the maritime archaeological record: "oil, gas and renewable energies extraction; port and harbor development; and pipeline, transmission line, or cable installation" (p. 133). In a mirror image of

terrestrial, development-led archaeology, the authors note that preventive work allows archaeologists to make new and unexpected discoveries, but that while this may correct previous biases, it also introduces new ones. The case studies explore the range and scale of processes affecting, and the legal frameworks to manage, the seas around the UK and USA. For landlubbers, there are some eye-opening details about the extent and diversity of threats.

The paper by Gibbs and Duncan on cultural site-formation processes provides a summary of their own volume, reviewed below. Finally, Brennan attempts to quantify the impact of trawling on shipwrecks. Research in this area, he notes, lags far behind that of oceanography and ecology, and Brennan draws on his work around the coasts of Turkey to demonstrate the kinds of damage done to shipwrecks by trawler fishing. Research suggests that up to 5 per cent of broken artefacts on a shipwreck are caused by the wrecking event; higher rates are to be attributed to trawling. If correct, then the scale of damage is striking, and rapid. For example, a 2011 survey of a badly damaged wreck, *Ereğli E*, recorded that 68 per cent of artefacts had already been broken; a year later, nearly every artefact was broken or missing. Brennan argues an important way forward is through alliances with marine biologists and their efforts to protect fisheries through restrictions on trawling in sensitive areas.

The papers in this volume offer a varied mix of overviews and more detailed case studies. Collectively, they provide an excellent introduction to the formation of shipwrecks from physical processes, such as the tidal scour of sediments, to human factors, such as salvage, as well as some of the heritage-management issues raised by the intensification of offshore human activities.

A name that crops up on several occasions in Brennan's chapter is SEAN KINGSLEY, the author of the next book under review: *Fishing and shipwreck heritage: marine archaeology's greatest threat?* Kingsley, as Brennan makes clear, has done much to raise awareness of the destructive effects of trawling; he has also courted controversy with his comments about UNESCO policy and the commercialisation of salvage—positions from which Brennan and others have distanced themselves. It is therefore perhaps appropriate that Kingsley's volume is published in the Bloomsbury Debates in Archaeology series.

The book comprises six chapters. Chapter 1 sets the scene, reviewing the range of threats to shipwrecks,

including dredging and pipelines, and culminating with what Kingsley argues is the greatest threat: bottom fishing. Despite the massive scale of this activity, sweeping “an area of seabed equivalent to half the world's continental shelves every year” (p. 18), there are no legal frameworks or policies of the sort that regulate the oil or gas industries, as discussed by Evans and Firth in the previous volume.

Chapter 2 provides historical context for the damage caused by trawling, starting with the Roman shipwreck (or, more probably, shipwrecks) at Pudding Pan Rock off the north Kent coast, and documenting its growing impact through to the present. Recent ‘catches’ include two 9.5-tonne conning towers from British First World War submarines, and a host of statues, ceramics and other objects fished up around the globe (see also Bynoe *et al.* on Palaeolithic finds from the North Sea in the August 2016 issue of *Antiquity*). Kingsley's core question is whether we should count ourselves lucky for these random discoveries, “or whether such finds are a microcosm of profound and systematic damage that merely taunts society at what is being lost” (p. 21).

Chapter 3 offers an historical perspective on the practice of bottom trawling, and provides some detail on the equipment used and its effects on the seabed; Chapter 4 turns specifically to the scale of the impact on maritime heritage. Drawing on his earlier work mapping shipwrecks in the Western Approaches and the western English Channel, Kingsley observes that almost 50 per cent of wrecks were found to have been affected in some way by fishing activity. The visual evidence is even more striking: figure 15 shows a side-scan sonar image of the seabed that looks like a field ploughed flat, with parallel furrows tracking relentlessly across the site of a wreck.

The analogy with ploughing is taken up in Chapter 5. Kingsley draws a parallel with debate in the UK during the late nineteenth century about the effects of ploughing on earthworks; that debate eventually led to laws and policies to manage and protect terrestrial heritage. Given that fishing trawlers have been dragging up finds for centuries, why, asks Kingsley, has similar protection for maritime heritage lagged behind? And why have marine ecologists been quicker and more vocal about the effects of trawling on marine life than archaeologists have about shipwrecks? One reason is the absence of a systematic recording scheme. If we lack a register of shipwrecks, how can they be managed? He also discusses several examples of successful schemes, most obviously that

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of English Heritage (see Oxley in *Site formation processes*), but also other examples where reporting and amnesty schemes have failed, possibly (although not conclusively) as a result of the deep mistrust between authorities and the fishing community.

So, what to do? Chapter 6 proposes eight strategies to foster change. Few would find anything with which to disagree: raising awareness, improving legislation and “interfacing with the fishing community to improve understanding and reach a consensus about balanced management” (p. 105). The challenge is how to operationalise these strategies. Kingsley suggests technology may play a role; for example, ‘pulse trawling’, which minimises contact with the seabed, and thus shipwrecks, electrically stunning the fish instead; predictably, however, there seem to be side-effects on other marine life. Other possibilities include applying the well-established ‘polluter pays’ principle that operates on land. Indeed, Kingsley suggests that taxing the fishing industry at a national level would be “the most just and effective approach” (p. 112); he also notes, however, that there is no appetite for this from individual governments, let alone the necessary international cooperation. Other possibilities include a ‘Red List’ of sensitive sites, and the use of exclusion or ‘geofenced’ zones, including enforcement with varied high- and low-tech solutions such as video cameras and concrete blocks.

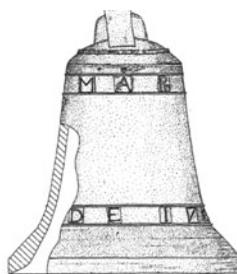
Kingsley’s book highlights the scale of damage underway and makes a strong case for action. It is disappointing, however, that the author has muddied the waters with occasional asides that seem to connect the issue of trawling damage with a case for commercial salvage. For example, in Chapter 1, the section on ‘Treasure hunters’ includes a discussion of UNESCO’s “anti-commercial philosophy” (p. 10) and how this has led authorities to misdirect their energies towards restricting the actions of salvage companies instead of dealing with the more extensive damage done by the fishing industry. Specifically, Kingsley claims that it is the misinterpretation of the UNESCO Convention that has led to the management mantra that preservation *in situ* is the only option available (excavation is viewed as “sacrilege”, p. 117), a situation that fails to acknowledge the ongoing damage caused by trawling. The problem is that while it is clear what Kingsley is arguing against, he does not plainly state what he is arguing for. Hence, he observes that “Western governments remain extremely dismissive of the concept of selling any archaeological heritage”

(pp. 14–15); and he provides three published examples of individuals arguing in favour of such commercialisation (including two from the 1970s, one of which was later retracted by its author); but he does not go on from here to state unambiguously that he is personally in favour of selling artefacts. Instead, he concludes this section by noting that his discussion of these issues is included simply “to flag up the hugely varying systems of action that may be considered to mitigate the effects of bottom fishing on underwater cultural heritage” (p. 16). At best, this is a red herring, an unnecessary distraction within an otherwise significant contribution. The danger is that, in tacking on an issue that is tangentially related, he undermines his important message about trawling.

Meanwhile, broader awareness of the threats to maritime heritage identified by these two books will hopefully be stimulated through the recent launch in the UK of the Marine Antiquities Scheme (<http://marinefinds.org.uk>), a voluntary reporting initiative based on the format of the terrestrial Portable Antiquities Scheme.

Peg legs and parrots

CHARLES R. EWEN & RUSSELL K. SKOWRONEK (ed.). *Pieces of eight: more archaeology of piracy*. 2016. xviii+318 pages, numerous b&w illustrations. Gainesville: University Press of Florida; 978-0-8130-6158-0 hardback \$39.95.



Several of the issues raised by Kingsley in relation to the sensitivities around commercial salvage arise in *Pieces of eight: more archaeology of piracy*, edited by EWEN and SKOWRONEK, a follow-up volume to

X marks the spot (Skowronek & Ewen 2006). In one of his contributions, co-editor Ewen raises the issue of professional archaeologists working with treasure salvors through the use of a historical analogy

Let us equate data with treasure [...] Archaeologists analyze, interpret, and publish the data. This is their currency in the business of academia [...] The treasure salvors see themselves as privateers, going after treasure

that would be lost to the elements or in environments too costly for the academic archaeologist to recover. They are willing to share the data with the Crown (the archaeological regulators), but their cut is the treasure itself (pp. 277–78).

Hence, archaeologists view salvors as ‘pirates’, destroying contexts and dispersing finds on the market, and collaborators may find their careers damaged. *Sans* pirate theme, Ewen’s characterisation of the situation is more or less the same as Kingsley’s. They are, however, squarely on opposite sides of the debate (the topic also comes up in relation to the galley ship *Whydah* in the editors’ chapter on Hollywood pirates, below).

The introduction outlines key themes in the study of piracy in the past. Three particular areas are lairs, pirate ships and attention to “victims and other willing participants” (p. 9). Here, comparison to modern and historical examples demonstrates the powerful stereotypes about pirates that need to be broken down so that the material signatures of piracy can be properly recognised; a search for “peg legs or parrot skeletons” (p. 12) will probably be fruitless. Most pirate ships, for example, were captured vessels—so their identification relies on the triangulation of textual sources with wreck locations and artefact patterns.

Of the 11 chapters that follow, some reprise case studies from *X marks the spot*, and others introduce new wrecks, or present new studies of ports and material culture. Amongst the former group, Wilde-Ramsing and Carnes-McNaughton revisit ‘Blackbeard’s *Queen Anne’s Revenge*’. Further investigations of this wreck, off the North Carolina coast, permit its more confident identification as the flagship of the pirate Edward Teach (aka Blackbeard). Key to this has been the discovery of clues emphasising a ‘French connection’; these are significant as the *Queen Anne’s Revenge* was formerly a French slave ship, *La Concorde*. These indicators include ballast that is geologically compatible with the *Concorde*’s last known port-of-call, the French port of Martinique, and one-quarter of all the artefacts are of French manufacture, including French window glass. Moreover, 45 individual (or classes of) artefacts put the date of the shipwreck in the early eighteenth century, and none are later than the known date of the wreck in 1718.

On similar lines, Hanselmann and Beeker present new evidence identifying ‘The wreck of *Quedagh Merchant*: the lost ship of Captain William Kidd’ off the coast of the Dominican Republic. Again, a series of clues point to its identification: the type, number and storage of cannons, ballast indicative of the Indian Deccan, the use of teak (*Tectona grandis*) from Southeast Asia for the ship’s construction and the typically Indian shipbuilding techniques. All correlate well with the textual records for this tangled episode of pirate-hunter turned pirate. Other papers that revisit wrecks first discussed in *X marks the spot* are De Bry and Roling on the *Fiery Dragon*, off the coast of Madagascar, and Gulseth on Black Bart’s *Ranger* in Port Royal, Jamaica.

Most of the chapters draw heavily on the textual evidence to inform their interpretations, including the consideration by Hanselmann *et al.* of ‘Henry Morgan’s raid on Panama’. Others, however, are less concerned with well-known figures or specific incidents. Kelleher, for example, provides a preliminary study towards an archaeology of ‘Ireland’s Golden Age of piracy’. Hatch addresses the iconography of pirate flags, tracing the genealogy of the skull and crossbones to gravestone art and flags of the English Civil War, yet the origins of the impaled and bleeding heart image remains unclear. Meanwhile, Kinkor searches for ‘Jolly Roger iconography’ on artefacts from shipwrecks, finding evidence such as coins pierced so that their Spanish Cross designs were rotated by 45° when worn as pendants.

Page and Ewen outline a provisional comparison of the varying proportions of different categories of artefact from four wrecks: two pirate ships, a naval vessel and a slave ship. The results suggest some initial differences, but as the authors acknowledge, the sample is currently too small to generalise. Deagan meanwhile offers a fascinating analysis of ceramics from a series of houses in St Augustine, Florida. By comparing the percentages of Asian, English, French and Spanish ceramics from individual houses between the mid seventeenth and mid eighteenth centuries, she is able to demonstrate very different social attitudes towards ‘contraband’. As Spanish vessels rarely carried non-Spanish goods, Asian, English and French ceramics are assumed to have been effectively illegal within this closed Spanish port. Deagan’s analysis shows that households linked to the military garrison or the religious orders avoided the use of illegal goods, but non-Spanish ceramics consistently

outnumbered Spanish ones in the household of the harbour master. Hence, for some individuals and families, pirates might have been viewed as ‘providers’. This fine-grained analysis offers a new perspective on the archaeology of piracy.

Exploring another angle on the topic, the editors assess ‘The influence of Hollywood on the archaeology of piracy’. They observe how the stereotypical fictional pirate was created in the middle five decades of the nineteenth century, in the years immediately following the suppression of piracy in American and Caribbean waters. It is this figure that has been endlessly recycled in Hollywood films; no matter how many subsequent books or DVD special features attempt to reveal the ‘true’ nature of pirates, the image is entrenched. “Perhaps”, the authors suggest, “use of the term ‘terrorist’ to describe them might resonate more with the modern public, who would then equate pirates with the terrorists’ reputation as murdering thieves” (p. 199). They also discuss how aspects of *Treasure Island* have been worked into popular belief, shaping expectations about how a pirate ship might be recognised in the archaeological record. The chapter as a whole strays back to much broader issues of the identification of pirate sites that complement those in the introductory and concluding chapters.

This is a fascinating volume that makes real progress with the archaeology of piracy. Importantly, it demonstrates that the topic is not limited to the identification of shipwrecks and their associations with individual pirates or the romanticised figures from literature and film. The extension of the analysis to terrestrial examples, and the nuanced analysis of the role of pirates in the circulation of material culture open the way for what co-editor Ewen argues is “not so much a history of piracy as an anthropology of piracy” (p. 274).

Different horizons

BRAD DUNCAN & MARTIN GIBBS. *Please God send me a wreck: responses to shipwreck in a 19th-century Australian community* (Where Land Meets the Sea 3). 2015. xv+243 pages, numerous colour and b&w illustrations, New York: Springer; 978-1-4939-2641-1 hardback £90.

JENNIFER F. MCKINNON & TONI L. CARRELL (ed.). *Underwater archaeology of a Pacific battlefield: the WWII Battle of Saipan*. 2015. xiv+160 pages,

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numerous colour and b&w illustrations. New York: Springer; 978-3-319-16678-0 paperback £44.99.



The title of the next volume, by DUNCAN and GIBBS—*Please God send me a wreck: responses to shipwreck in a 19th-century Australian community*—is a reminder that for

some coastal communities, a shipwreck might provide opportunity. As so often in life, one person’s misfortune is another’s good luck. At the heart of this book is the apparent contradiction between the altruistic attempts by coastal communities to save the lives of crews and their “much more insidious and economically motivated” actions, “sometimes skating a thin line along the edge of legality, and in some instances passing well beyond” (p. 70).

The volume starts from the premise that shipwrecks should not be approached as momentary disasters out at sea, but rather contextualised in relation to the coastal communities involved in attempts to avert, and then respond to, wrecking events. Their proposal is a cultural landscape approach that allows shipwrecks to be understood from multiple perspectives (that of the sailors, the rescuers and so on) and as new and meaningful places.

The phrase chosen by the authors to refer to such wrecking events is ‘shipping mishaps’, a term that encompasses strandings and other incidents that do not necessarily result in vessel loss. This breadth of scope is crucial later on, although one cannot help thinking that those involved in some of the more serious ‘mishaps’ might have found this label somewhat euphemistic.

The case study used to explore this approach focuses around Port Phillip Bay on the coast of Victoria, Australia, and, in particular, the treacherous and narrow entrance to the bay known as The Heads. With the development of Melbourne on the north side of the bay, maritime traffic through The Heads increased significantly—as did the number of mishaps, with a significant cluster of wrecks around the entrance to the bay. The community of Queenscliff, set on a narrow peninsula overlooking The Heads, is the central focus of the book. Place names, documentary and ethnohistorical sources including oral histories and folklore, and systematic

field survey along 80km of coast inform the analysis.

The book is structured around the authors' model of a series of 'stages of response' (fig. 2.1), building on Muckelroy's much-used flow chart (see above). Chapter 3 addresses attempts to avert and prepare for shipping mishaps; Chapter 4 concerns the 'Crisis phase' and its immediate aftermath; and Chapter 5 examines 'Mid- and long-term responses'. These chapters outline the concepts and present the documentary evidence, such as a history of Queenscliff and the piecemeal development of mitigation strategies such as the creation of the lighthouse and lifeboat services. The authors then work through the same three phases from a landscape perspective, examining the material culture; hence, Chapter 6 maps onto the risk prevention and mitigation addressed in Chapter 3, and Chapter 7 addresses the 'Crisis' and 'Long-term response' phases addressed in Chapters 4 and 5. Although conceptually clear, this structure leads to some fragmentation and repetition. Hence, the background to the foundation of the lighthouse service appears on pp. 52–54, and the lighthouses themselves on pp. 107–13. Similarly, the jettisoning of coal by ships in distress and the collection of this valuable resource on the beach are discussed on pp. 97–100 and 165–66 respectively (apparently the higher temperatures caused by using this coal in wood stoves burnt out the fireboxes, leading to an unexpected boon for the local plumbers who fixed them). Other flotsam and jetsam collected included timber, coconuts and sheep. One canny fishing community repurposed salvaged sheep shears as fish knives, and another story concerns an immigrant fisherman driven to stealing hams recovered from a wrecked vessel: "I don't particularly want the blessed hams, only they do put me so much in mind of dear old Yorkshire" (p. 80).

The material culture chapters work through the evidence for the structures built to avert shipping mishaps (lighthouses, buoys and the like), for salvage efforts, including the construction of a tramway as illustrated in figure 5.4 (see also tab. 7.5), and for the artefacts jettisoned, recovered and reused. There is also consideration of stranding sites—shipwrecks that never were. Duncan and Gibbs suggest that it is possible to find archaeological signatures for these poorly studied mishaps; for example, in the form of deposits of coal.

Chapter 8 synthesises 'The social landscapes of shipping mishaps', emphasising how stranding and

wrecking events were moments when conventional social norms were temporarily overcome; subsequently, these incidents would provide new opportunities for social and economic differences to re-establish themselves through, for example, the regulation of salvage or by looting. As the hungry Yorkshire fisherman (above) suggests, Queenscliff was a community of immigrants, and Duncan and Gibbs suggest that many of the responses to shipping mishaps were shaped by the maritime traditions of other places and cultures. Consequently, the Conclusion sets the evidence from Queenscliff in an international perspective, especially with regard to the British connection, as well as identifying wider lessons for maritime archaeology.

The volume is illustrated with numerous colour and black and white maps, photographs and prints. The GIS maps are serviceable (land = green; sea = blue), but some indication of topography would have given a stronger feel for the coastal landscape, the sensory perception of which is discussed in relation to sea lore (p. 136; also tab. 6.6). Similarly, the sequence of paired maps showing the evolution of navigation infrastructure and shipwrecks over time would also have been easier to compare if the relevant pairs had been on the same page.

Please God send me a wreck makes a persuasive case for approaching shipping mishaps from the perspective of coastal communities, and, in particular, thinking about responses over different time scales and across different social groups. As a result, there is no contradiction between the altruistic and high-risk efforts of coastal communities to save the lives of sailors in distress while, at the same time, praying for such mishaps in the first place.

Our final destination is Saipan, the largest of the northern Mariana Islands of the North Pacific. *Underwater archaeology of a Pacific battlefield: the WWII Battle of Saipan*, edited by MCKINNON and CARRELL, presents the results of a project to develop access to the maritime cultural heritage of the island's twentieth-century military past through the creation of an underwater heritage trail.

Saipan was the focus of ferocious fighting during late June and early July 1944 as the US military drove out the Japanese army. But this is not simply a story of two opposing military groups. Caught, literally, in the crossfire were the island's indigenous population and a group of Japanese civilians, many of the latter committing suicide rather than surrendering to the Americans. For descendants of all these different

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groups, the heritage of Saipan is understandably difficult.

The volume, published in the Springer Briefs in Archaeology series (would *Briefings* not have been a better name?), consists of 12 short and varied chapters. Co-editor McKinnon introduces the project: over four years, an international team conducted a survey of terrestrial and maritime sites, with the objectives of developing an underwater trail and documentary film. Several of the books reviewed here make the point that one of the best ways to protect maritime heritage is for local communities to value it. On Saipan, however, the local population had very little investment in a heritage associated with a war between two occupying powers. Hence, the project had not only to consider how to deal sensitively with the different perspectives of two combatant nations, but also how to engage the local population with this ‘colonial’ cultural heritage. In the following chapter, Cabrera provides an overview of the history of Saipan before, during and after the Second World War battle.

Burns and Krivor sketch the methods of the survey of the Second World War landing beaches on the west coast including remote sensing and diver investigations; Raupp and colleagues then outline the underwater survey, detailing the legislative context, the logistical and safety considerations (including unexploded ordnance), recording methods and, very briefly, the results: 10 shipwrecks, 5 aircraft, 7 assault vehicles and a navigation marker, all of either US or Japanese affiliation. The chapter’s suffix, ‘A multiagency, collaborative approach’, may partly explain some of the alphabet soup found therein—the HPO, MVA, NPS, PRMI and WHOA. But combined with CRM programmes, HADS training, reporting of UXO to DEQ, the NOAA and ABPP grants, and so on, the text is a minefield of capitalisation. Archaeology, as with any discipline, makes use of acronyms to avoid repetition and to communicate more efficiently. In places, however, this chapter requires deciphering with, rather than occasional reference to, the list of abbreviations.

All the books considered so far have assumed that the wrecks in questions are those of ships, but the chapters by Bell and Arnold tackle the wrecks of aircraft and amphibious vehicles respectively. They draw out the similarities and differences between ‘conventional’ shipwrecks and the wrecks of air- and landing craft; both authors adapt the flow chart scheme developed by Muckelroy (see above) to step through the environmental and cultural formation

processes. There are indications, for example, that not all of the aircraft crashed; at least one may have been deliberately decommissioned. There is also evidence for damage caused by visitors (some of the sites are in shallow water only metres from land). In a similar vein, Hanks examines ‘The three M4 Sherman tanks that never reached the shore’, and attempts to work out what happened to these vehicles. The precise explanations probably vary, but Tank 1, he argues, may have slipped into an underwater shell or bomb crater.

Katz returns to a broader view of the west coast and undertakes an initial KOCOA analysis—here, an acronym is very much in order: key terrain, observation and fields of fire, cover and concealment, obstacles, and avenues of approach and withdrawal. This method, adopted from the military, has been used primarily in relation to the archaeology of US Civil War battlefields; it seems, however, that it is less well suited to the analysis of the sort of prolonged military engagement, with shifting objectives, experienced on Saipan. Several of the other chapters apply these ideas less formally and to specific, localised examples.

On-site conservation surveys of the underwater vehicles are reported by Richards and Carpenter, considering the corrosive effects of seawater on iron and aluminium, the encrusting of surfaces with various organisms and the effects of human disturbance. Fowler and Booth provide an ecological perspective on the vehicles, not as heritage but rather as artificial reefs; they find that aircraft have been populated with fish populations similar to those on nearby coral reefs. They point out that this may attract fishing activity, as discussed by several other volumes reviewed here, and that this should be factored into management strategies.

A central aim of the project was to create a documentary film for the benefit of those unable to don their scuba outfits and follow the heritage trail in person. Carrell details the making of the film (available at: <https://www.youtube.com/watch?v=ktXdO4OHvcg>), and considers some of the technical and ethical issues involved. McKinnon brings the volume to a close with a consideration of the role of archaeology and heritage in healing “unresolved political and historical tensions” (p. 147). Does developing such sites as heritage destinations prolong the traumas of the past, or, conversely, help to address them by dealing directly with their legacy? McKinnon is of the latter opinion.

It is interesting to compare the film and the chapters in this volume. The former—with beautifully shot underwater photography—focuses squarely on the military campaign and the hardware-cum-heritage scattered along the coast; the trail itself comprises 12 vehicles, including the US Avenger and Japanese Kawanishi H8K aircraft, and a variety of landing vehicles. The film does not mention the indigenous population and the gruesome fate of much of the Japanese civilian population. In contrast, the volume under review is more firmly concerned with the aims and organisation of the project; in particular, it emphasises engagement with the local populations of Chamorro and Carolinian descent, and their attitudes towards this ‘colonial’ heritage. The film also inevitably gives a much better sense of the military hardware rusting in the island’s clear waters than do the static images of the printed volume. If, however, you want the fully immersive experience (no pun intended), a 3D version of the film is on show at the heritage centres in Saipan and Guam.

“Shipwrecks have captured people’s imaginations for millennia”: the opening line of the first book reviewed above (*Site formation processes*, p. 1) thus recognises an enduring fascination. At the time of writing, Henry VIII’s *Mary Rose* has just been released from the paraphernalia of 30 years of conservation to be revealed in her full glory (BBC News 2016), and archaeologists from Sweden report the discovery of a 340-year-old tin of cheese during excavation of the wreck of the warship *Kronan* (*The Guardian* 2016). Shipwrecks seem destined to capture our imagination for some time to come.

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Books received

This list includes all books received between 1 July 2016 and 31 August 2016. Those featuring at the beginning of New Book Chronicle have, however, not been duplicated in this list. The listing of a book in this chronicle does not preclude its subsequent review in *Antiquity*.

General

- ROBERT L. BETTINGER. *Hunter-gatherers: archaeological and evolutionary theory*. 2015 (second edition). xv+304 pages, several b&w illustrations. New York: Springer; 978-1-4899-0658-8 hardback \$149.
- DAVID ROLLASON. *The power of place: rulers and their palaces, landscapes, cities, and holy places*. 2016. xxi+458 pages, numerous colour and b&w illustrations. Oxford & Princeton (NJ): Princeton University Press; 978-0-691-16762-6 hardback £37.95.
- EFRATIOS STYLIANIDIS & FABIO REMONDINO. *3D recording, documentation and management of cultural heritage*. 2016. xix+388 pages, numerous colour and b&w illustrations. Dunbeath: Whittles; 978-184995-168-5 hardback £85.
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