The International Journal of Nautical Archaeology (2010) **39**.1: 195–234
doi: 10.1111/j.1095-9270.2009.00260.x

Reviews

Prehistoric Coastal Communities: the Mesolithic in western Britain

(*CBA Research Report* 149)

MARTIN BELL with 34 Contributors, CD editors B. Taylor and P. Griffiths

381 pp., 142 b&w figures, 15 tables, CD with 350 images

Council for British Archaeology, St Mary's House, 66 Bootham, York Y030 7BZ, UK, 2007, £35 (sbk), ISBN 978–9027716499

The last throes of the Ice Age finished 11,500 years ago. The ameliorating climate was exploited by opportunistic people who took advantage of the rich resources exposed as the ice retreated. These pioneers were the Mesolithic peoples, who were to become the building blocks of the British, yet relatively little is known about them as they have been largely sidelined in preference to the artefact-rich phases of humanity which followed.

To date, interpretation of the Mesolithic in Britain has chiefly focused on the study of the typology, use-wear and distribution of worked stone tools. The passage of time has robbed us of the organic materials and of structures which may have been built, leaving little more than these most robust elements of their lives. This is somewhat frustrating, as the Mesolithic represents a phase of human occupancy in Britain that lasted the best part of 5500 years; almost half the time taken for modern societies to develop following the Younger Dryas cold stadial (a 1500-year mini Ice Age *c*.13,000–11,500 BC). It should also be noted that the most attractive lands available for habitation during the Mesolithic are now many metres below the sea. This is a problem highlighted by Martin Bell at the beginning of this excellent monograph which looks to put some meat on the bones of a poorly-represented phase of human cultural evolution.

Prehistoric Coastal Communities examines the contribution which coastal sites can make to our understanding of the Later Mesolithic. The research is driven by several principal questions which look at the role of plant resources, effects on the lives of Mesolithic communities of a changing environment, evidence for the managed use of fire to manipulate vegetation, indications of seasonality and associated territories, or, conversely, evidence for sedentism in the later Mesolithic as demonstrated by material-cultural change and increased social complexity.

The area subject to greatest study was Goldcliff on the Welsh side of the Severn estuary, south of the second Severn Crossing. A steady rise in sea-level brought with it sediments which built up on the margins of the estuary, covering the old land surface. The accumulation of fine-grained silt buried and sealed that which went before it in saturated anaerobic sediments. Peeling back the layers, Martin Bell and his team have uncovered a myriad of well-preserved features and artefacts which reflect a succession of occupation events between 6000 and 4800 cal. BC.

As the water continued to rise in the middle of the Holocene, the estuary was steadily growing and inundation of the foreshore increasing. While this was happening the area was far from ignored by the human population, and repeated visits were made to the inter-tidal zone. The most striking evidence for this has been found in the form of human footprints captured within intercalated layers of sediment: 270 of these footprints that criss-cross the ancient mud flats were attributed to 21 individuals. Of these, four were adults (over 14 years) seven were 'sub-adults' (11–14), two were older children (7–11) but the majority (67%) were made by seven or eight young children of 3–6 years old. Not only does this discovery indicate patterns of movement, primarily along palaeo-channels, but it provides tangible evidence for family interactions where group members of different ages were walking together on the mud-flats. There are also tracks of birds and animals, making clear the variety of food resources in the region. The discovery and recording of the tracks is testimony to the tenacity of the author and the professionalism of the operation.

The implications of the footprints in the silt are all the more remarkable because they give access into a way of life that, until now, has been largely conjecture. Interpretation of the Mesolithic has been dominated by thousands of flint tools, conjuring up images of robust natives relying on worked stones for their survival. Stone tools were inevitably found at the site, but so too were intricately-worked pieces of wood and bone. Indeed, the worked wood recovered from Goldcliff, in the order of 53 pieces, more than doubled the entire collection previously reported in the UK. Although, over the last few decades, a large amount of organic material has been identified in the Baltic, very little has been recovered from this side of the North Sea. This fact by itself demonstrates the value of coastal Mesolithic sites in the UK.

Mesolithic discoveries have been made within the Goldcliff inter-tidal zone for decades, but the artefacts and ecofacts reported in this Research Report were the

Published by Blackwell Publishing Ltd. 9600 Garsington Road, Oxford OX4 2DQ, UK and 350 Main Street, Malden, MA 02148, USA.

result of the most recent excavations, since 2000. The innovative methods used during the fieldwork are described in detail. They were tailored to suit the wet and muddy conditions which saw the site being drowned at each high tide. Consequently, some material was recorded *in situ* while selected elements were recovered in block samples for excavation in more-controlled conditions. Another factor influencing the excavation technique was an appreciation of the site-formation processes. This is essential when trying to unpick the relationships between artefacts, palaeo-environmental deposits and relic land surfaces. Accordingly, the geomorphological evolution of the estuary is described early on in the publication, while the taphonomy and stratigraphy is revisited for each area excavated.

Material recovered from the excavations, over and above the wood, bone and lithics, included faunal remains associated with human exploitation. Bone from deer, aurochs and boar were all recovered along with fish and eel bones. Some evidence of micro-wear exists on some of the worked tools, but even more indicative of everyday life were the human intestinal parasites (*Trichuris* sp.) located in areas adjacent to the main habitation sites. This is the earliest example of defecation practice in the UK.

The plant macrofossils recovered (for example hazelnuts) demonstrate the utilisation of resources from the woodland edge, and the widespread recovery of charcoal informs the case for the practice of burning as a tool to modify the vegetation growth in the landscape. Despite the breadth of activities—not to mention evidence for the possible existence of shelters—Bell demonstrates that the density of material does not support year-round activity. Rather, the evidence reinforces a model where Mesolithic groups would migrate within a territory, exploiting resources which would vary seasonally from place to place. The axis of migration would have been waterways which gave access between lowland coastal fringes and the higher ground upstream.

The work at Goldcliff is not examined in isolation, and comparison is made with many sites across the region, thereby providing well-informed interpretations. This includes a second case-study from Prestatyn in north Wales. Material culture from this area dates to a period that transcends the Mesolithic, extending into the Neolithic from 4500 to 3400 cal. BC. Akin to the investigations at Goldcliff, Prestatyn revealed lithics, faunal remains, palaeo-environmental material and even footprint tracks. Another feature of interest was a Neolithic female burial uncovered from beneath Prestatyn High Street in 1924, but only recently dated to 3750–3535 cal. BC. The discovery of the skeleton warrants comparison with earlier sites from Denmark where burials have been linked with year-round coastal sites. This is particularly notable as the main archaeological characteristics of the site were six small mussel-and-cockle shell-middens. However, despite the strong maritime influence at Prestatyn and occupation being in a period when the more sedentary Neolithic became established, the report concludes that the sites were short-term field-camps without notable settlement, and the occupation patterns were akin to those seen in South Wales.

The summary outlined so far is largely based on the conclusions which are drawn from the many specialist studies within the report. The valuable contribution to archaeological science where Martin Bell and contributing authors have presented the results of multidisciplinary studies in the body of text is very significant. The magnitude of the work is such that a CD is added, which contains over 350 images, tables and appendices. Sections in the main text are attributed as follows. A temporal context for the site was made possible through dendrochronological analysis by Nigel Nayling, who worked with Stuart Manning, B. Kromer, C. Brook Ramsey, C. Pearson and S. Talamo to produce a 'wiggle-matched' radiocarbon-dated sequence of the submerged forest. The Goldcliff lithic artefacts were analysed by R. Barton, J. Allen, A. van Gijn and M. Bell. The worked wood was studied by R. Brunning while the bone and antler tools, as well as the footprints, were analysed by R. Scales and M. Bell. The palaeo-environmental vegetation was studied by P. Dark and S. Timpany, the charcoals by R. Gale, the sediments by J. Allen and V. Yendell and the insects by E. Tetlow. The excavations in Prestatyn were reported by E. Thomas and W. Brintnell, the radiocarbon dating was by P. Dresser and the molluscs, both marine and terrestrial, by S. Johnson and M. Bell. Seasonality studies of cockles was by E. Fancourt with pollen analysis by A. Caseldine and B. Brayshaw. A. Caseldine also analysed the macrofossils and studied the charcoal with S. Johnson. Animal bones were studied by M. Armour-Chelu and flints by E. Healey. The 'Prestatyn Woman' was reviewed by R. Schulting and S. Gonzalez; investigations at Melyd Avenue were presented by M. Bee, A. Caseldine, J. Norris-Hill and D. Thomas while the work at Splash Point, Rhyl, was reported by M. Bell. The detailed project context, critical analysis, integrated interpretation and wide-ranging conclusions were all constructed by the author.

The range of contributors and the breadth of topics covered clearly demonstrates the rich source of archaeological data within these pages. A key factor for the preservation of so much material is the nature of the saturated anaerobic environment where organic material can last many millennia. The report demonstrates that coastal archaeological sites can contribute a great deal to our knowledge of the Mesolithic, and lays sound foundations for future studies to build upon. It is a 'must' for any student of the Mesolithic and a most desirable read for voyeurs of the past.

So, finally, what has this study told us about increased social complexity and material-cultural

change as the Mesolithic turns into the Neolithic? The collective evidence points towards a gentle transition from one epoch to another. It shows that the same areas within the landscape continued to be used but with increased interaction and manipulation. It does not suggest increased coastal sedentism and social development. The conclusions are tantalising as the situation is at odds with that seen in northern Europe, particularly around the Baltic, where later Mesolithic cultures appear to be drawn to the coast resulting in social and technological advancement. Many of these changes look to have been triggered about 8000–8500 years ago, which equates with the severance of Britain from the Continent and the inundation of the North Sea. Coastal resources become more evident in the Mesolithic record, although this may not be surprising as the coastline was advancing, continually pushing inland. The lack of apparent settlement in the later Mesolithic is worth comparing with the high levels of technical sophistication seen at Starr Carr, Howick, East Barnes and from the discoveries beginning to come to light at Bouldnor Cliff (Isle of Wight). All these sites predate the final severance and have elements of sedentism, so why does the trend not appear to be sustained? Martin Bell's seminal work now begs the question, was there a cultural link between British and Continental Europe before separation? If so, did the separation instigate a divergence? To address these issues we need to go further back in time, which means we need to extend our search down the beach and then under the water.

GARRY MOMBER
HWTMA, Southampton, England

Europe Between the Oceans, Themes and Variations: 900 BC–AD 1000

BARRY CUNLIFFE

518 pp., 288 illustrations, including many in colour

Yale University Press, 47 Bedford Square, London WC1B 3DP, 2008, £30.00 (hbk), ISBN 978–0300119237

This book, the latest in a long list of scholarly titles by Barry Cunliffe, opens with a survey of the main dimensions of Cunliffe's perspective upon the Holocene prehistory and early history of Europe. These are: geography, time, population growth, mobility and interaction. He sees them as best comprehended within a Braudelian model that discriminates historical processes at different scales, of which the fundamental, or *longue durée*, is the level of particular interest here. In this and other respects, *Europe Between the Oceans* looks very much the same as *Facing the Ocean: the Atlantic and its peoples 8000 BC–AD 1500* (Oxford University Press, 2001). It is about the same length, it is organized in the same way with initial chapters on concepts and geography, middle chapters set out as a linear narrative of prehistory, and a concluding chapter on features of the *longue durée*; it has plenty of maps in the same style, and similarly numerous images, particularly of places and things in maritime archaeology. It has, in addition, a somewhat similar theme. In *Facing the Ocean*, Cunliffe argued that fundamental commonalities of maritime landscape along the 'Atlantic façade', coupled with seaborne mobility, created a longstanding, seaward-looking community of interests, values and beliefs, summed up in his conclusion that, 'those who are of the Atlantic inherit a mindset that is markedly different from that of the dwellers of the continental interior' (p.554).

The different mindset and other features of the continental interior might have been expected to loom large in *Europe Between the Oceans*, but they do not. Instead, Cunliffe takes another long stride towards understanding the significance of the sea in European prehistory and early history. He poses this first as a question, 'why was it … that Europe above all other regions managed to achieve … dominance' (p.vii) in worldwide colonization, trade and cultural export after the 15th century? Immediately comes the answer, that it was the culmination of a long history dominated by the influence of geography. High ecological and resource diversity, congenial climates, and compactness, 'everything that was required was within comparatively easy reach' (p.vii), encouraged population growth, social complexity and competition which, in turn, drove technical innovation, production and exploration. *Europe Between the Oceans* is a narrative prehistory of how the cultural landscape of Europe evolved under the urgings of a level of mobility that Cunliffe takes as peculiarly European.

In *Facing the Ocean* such mobility was understood within the indubitably maritime concept of an Atlantic façade. *Europe Between the Oceans* is not so closely defined in this regard. The geographical device here is 'the westerly excrescence of the continent of Asia, which we call Europe' (p.vii) conceived as a peninsula, and thus with a subordinated interior, around and across which flowed the traffic of conquest, commerce and communication. Europe's unique advantage, Cunliffe argues, is its deeply involuted coastline, 37,000 km long, which encouraged maritime mobility, created two zones of maritime innovation, on Atlantic (plus Baltic) and Mediterranean (plus Black Sea) coasts respectively, and allowed relatively-short transcontinental routes of interaction between them. The book focuses on the development of coastal settlement, routeways and interaction around the coast and along the rivers between the 'four oceans of Europe, five if we distinguish the North Sea from the Atlantic' (p.60). 'Oceans' here and elsewhere in the book is not a suitable gloss, the

classical usage of 'Ocean' notwithstanding. Oceans and seas are distinguished on good and important grounds; size, currents, swell patterns, wave heights, salinity, tidal ranges, and the various cultural implications of these for travel, ecology, intertidal resources and so on. Coastal dwellers, as Cunliffe himself makes apparent in *Facing the Ocean*, lived in quite different circumstances on Atlantic shores than in the Mediterranean, Black Sea or Baltic. Further, in tracing the story of maritime Europe here, Cunliffe states again his contention (p.86) that Atlantic communities may have had a different world-view.

Most of the book is devoted to a history, largely derived from material culture, of population mobility and trade, and their consequences, from the Mesolithic to the end of the first millennium AD, seen from a coastal stance. In the arrival of the Neolithic, the book dwells upon Aegean and Mediterranean coastal expansion, proceeding then to describe coastal archaeology from the Mediterranean to the Baltic up to the early 4th millennium BC, and then the broader diversity of coastal and inland settlement and interaction during the late Neolithic across Europe as a whole.

The pace of change quickened in the Bronze Age with greater variety and quantity of commodities in motion and stronger hierarchical control of production and distribution, but also stronger political boundaries, more capable ships and new means of land transport. These facilitated the integration of a Europe-wide network of communication, especially in meridional connections between Mediterranean and north European coastlands. In the late Bronze Age there was collapse and transformation of some major polities in the eastern Mediterranean and a seeming emphasis upon competition and conflict across Europe generally under the impetus of sustained population growth. This was a period in which, Cunliffe suggests (p.235), 'something approaching a pan-European culture begins to appear. The beliefs, values and behaviours [of the late Bronze Age] resonate throughout much of Europe's subsequent history'.

Chapter 9 is the fulcrum of the narrative. Cunliffe describes the period 800–500 BC as 'the three hundred years that changed the world'. Leaving aside such casual Euro-centrism, which is too common in the writing, the argument is that Phoenician and Greek expansion created a cultural zone through the Black Sea, and the Mediterranean and its proximate Atlantic regions, that began to define the classical and historical characterization of Europe as comprising a civilized south and a barbarian north. Succeeding chapters recount the vicissitudes of state and empire building in Europe, invasions from east and north and the emergence of the modern polities.

There is much about *Europe Between the Oceans* to commend. The author's command of the full sweep of European archaeology is deeply impressive. The book is written admirably for an educated but general readership, presenting a well-illustrated and readily accessible chronicle of the development of European prehistory and early history. It is, of course, aligned to a maritime perspective, which is a perfectly valid approach, indeed one to be encouraged, but it is necessary to be more aware than the author's scarce reminders are likely to inculcate that emphasizing coastal margins creates a conceptual compression to the disadvantage of the archaeology of the interior. I suspect that this strips from the interior much of the actual influence and agency it had in creating and modulating transcontinental and peri-continental interactions. It is quite possible that another reading of the same sources of evidence might see many of the changes in coastal cultures as largely the product of inland production, population growth and political influence, and inland imperatives of supply and demand.

The general approach of cultural palaeo-geography, for want of a better term, is also rather in vogue at present in maritime studies, notably in maritime landscape modelling, employed in northern Europe especially, and in historiographical ideas for a 'new thalassology' in the Indian Ocean. Such approaches have the advantage of imputing to the sea the profoundly dynamic role in shaping cultural history that seems intuitively probable rather than, as has often been the case otherwise, of viewing the sea as a passive and neutral source of food and an avenue for transport. One disadvantage is a tendency toward teleological construction of explanations. I had an uneasy sense of the latter in reading *Europe Between the Oceans*. In looking to discover how Europe became so dominant in early modern history, Cunliffe constructs a narrative, especially in summary remarks at the end of each chapter, which invites the conclusion of a long road toward manifest destiny; the chronicle of change seems to move progressively through the stages of creating the kind of Europe that was essential to understanding its modern history.

The common way to avoid the impression of that error is by parallel analysis of comparable and contrasting cases. Doing so might have helped the author to see that some things that he perceives as being of a peculiarly European quality or dimension are not so at all. Even simple things like the significance of coastline length. The length, of course, depends upon the scale of intercept in measuring it, but that aside, the 37,000 km of European coastline 'equivalent to the circumference of the world' (p.31) may have no more to do with the Holocene history of Europe than has 60,000 km of coast to that of Australia. A high ratio of coast to land may have no more significance to early development of civilization in the Aegean (p.31), than similar landscapes to a relative absence of civilization in mid-Holocene Scandinavia, Indonesia, the west Pacific or southern Chile. Again, it is very doubtful whether cultural mobility, the central dynamic of Cunliffe's model, was demonstrably less than in East Asia or, had

we comparable data, would be seen as such in South-east Asia, the Pacific or the tropical Americas. Imbalances of demand and supply, diversity of habitats and population density, and so on, which created the relative scarcity underpinning Braudel's model and the mobility and innovation that ensued from them are, and were, commonplace globally.

These points aside, *Europe Between the Oceans* makes a singular contribution to understanding the mercantile, and especially maritime, prehistory of Europe. The author may not welcome the thought, but a third volume is wanted, on the Mediterranean, to complete a remarkable trilogy.

ATHOLL ANDERSON
Australian National University, Canberra

Neolithic Archaeology in the Inter-Tidal Zone

JANE SIDELL and FIONA HAUGHEY (eds) with 9 Contributors

106 pp., 36 b&w figures, 9 tables

Oxbow Books, 10 Hythe Bridge Street, Oxford OX1 2EW, UK, 2007, £30 (sbk), ISBN 978–1842172667

This volume presents papers from a conference held in 1999. While the editors recognise the substantial time it has taken to reach publication they are keen to point out that the contents of the volume still have much to contribute to inter-tidal archaeology in the United Kingdom. When the conference was held there had been a number of large-scale archaeological projects in the inter-tidal zone—particularly the Wootton Quarr project, Langstone harbour, and numerous investigations along the Severn estuary. All these projects (which are represented in the volume) added substantially to the understanding of the prehistoric potential of the inter-tidal zone, a fact which has been further underlined in *England's Coastal Heritage* (Fulford *et al*., 1997, London).

The volume contains seven papers, which include examples of Neolithic archaeological studies undertaken in England, Scotland and Wales. The short preface provides a brief introduction to the volume and identifies some of the key issues relating to coastal archaeology such as threats from erosion, lack of funding for study, and the small number of people working within this environment. The papers follow in what appears to be geographical order from the south-west of Scotland, to Liverpool Bay, across the Severn estuary and down to the south coast of England to the Isle of Wight and Langstone harbour, finishing with the Thames estuary.

Chapter 1, by Michael Cressey, demonstrates how much of the inter-tidal archaeology from the Scottish side of the Solway Firth is found in cliffs, highlighting the impact of climate change, particularly isostatic tilt, in determining the environmental conditions in which Neolithic evidence is found. Detailed review of palaeo-environmental records has revealed dated evidence of sea-level and environmental changes across the Holocene transgression. The paper demonstrates how productive it is to take a holistic approach through the consideration of terrestrial finds alongside environmental evidence together with evidence of sea-level, landscape and climate change.

In Chapter 2 Gonzelez and Cowell review evidence from three principal sites in the Liverpool Bay area: an antiquarian collection from the construction of Preston docks in the 1880s; the fascinating footprint evidence from Formby Point; and an inter-tidal trackway at Hightown. The paper demonstrates the potential of the evidence to inform on much broader aspects of human activity than coastal exploitation, pointing to how it can and should be used to help interpret aspects of mobility and land-use in the Neolithic. This topic is taken further in ch. 3 by Bell, who uses the wealth of evidence from the Severn estuary to take an analytical approach to the relationship between coastal and terrestrial records for the Mesolithic and Neolithic. He examines how the combined evidence from the two environments can add not only to current models of behaviour patterns, but also to interpretations of long-term landscape use and phenomenological approaches. The distribution maps help demonstrate that the estuary was a communication route rather than a barrier—a perception common among those not familiar with water transport.

Chapters 4 (Loader) and 5 (Allen and Gardiner) review two significant Solent projects, Wootton Quarr and Langstone harbour, which both provide evidence of the potential of the inter-tidal zone. At Wootton Quarr the Neolithic evidence included five trackways, numerous wooden posts, lithic scatters and tools. In concluding, Loader draws attention to finds being made in other areas of the Isle of Wight, and how further material is being exposed by continued coastal erosion. Across the Solent in Langstone harbour the Neolithic evidence includes peat deposits and preserved trees, but is largely based on lithic evidence gathered during extensive walk-over surveys. The collection is examined in the context of the development of the harbour and the extent of any potential marine influence from the Neolithic period.

The final chapters, 6 by Wilkinson and Sidell and 7 by Haughey, move to the Thames estuary. The former examines the developing environment of the river, particularly sedimentary and hydrodynamic influences and effects of sea-level changes, to provide context for Neolithic finds and broader activity-patterns in the area. This data is used to argue that the Thames may not have been an attractive place for settlement in the Neolithic, being more of a 'backwater' which people passed through. The latter paper takes a detailed look at Neolithic finds from the river over the past 200 years, which include peats, forest-remains, wooden fea-

tures such as stakes and hurdles, in addition to the lithic finds. The opportunity to record such inter-tidal exposures may be limited as continuing erosion reveals more evidence. However, Haughey points out that funding to progress fieldwork, or for publication of many of the findings of the Thames Archaeological Survey, is not currently available.

There are a few minor problems with the volume—the omission of bibliographic references for ch. 2 and low image quality in the same chapter, but this should not detract unnecessarily from the volume. The overwhelming impression gained from the papers is to reaffirm the prehistoric potential of the inter-tidal zone. This is perhaps timely in light of the growth in research on submerged and coastal prehistoric landscapes, and can only add to this area of study. A number of the papers stress the need to review inter-tidal remains within their wider archaeological context, so one hopes that this volume will encourage more archaeologists to put their wellies on and get muddy!

JULIE SATCHELL
HWTMA, Southampton, England

The Parting of the Sea: how volcanoes, earthquakes and plagues shaped the story of Exodus

BARBARA J. SIVERTSEN

262 pp., 5 illustrations, 8 maps

Princeton University Press, 41 William Street, Princeton, New Jersey 08540–5237, USA, 2009, $29.95/£20.95 (hbk), ISBN 978–0691137704

The exodus of the Israelites from slavery in Egypt to the desert and to freedom is one of the principal foundations of western civilizations. The well-known myth justifies, legitimizes and supports rebellion against tyrannical authority, and links the major monotheistic religions with sensitivity to freedom and social justice. Numerous miracles (extra-natural phenomena) accompany the exodus, from the plagues that were inflicted on the Egyptians, through the handing down of the Law, to the collapse of the walls of Jericho. To believers, these miracles epitomized the powerful existence of the Lord, but doubters, who tried to rationalize the Biblical myths, were perplexed by the precision of the environmental descriptions of these miracles.

Bible critique and rationalization stem from the scholarly studies of Julius Wellhausen (1844–1918) and Friedrich Delitzsch (1850–1922), whose research on the first six books of the Old Testament tried to demonstrate and rationalize their historical and social context. Wellhausen and Delitzsch argued that the Torah (the first five books of the Bible—known also as the Pentateuch—as well as the Book of Joshua), is the product of the editing of four originally-independent texts dating from several centuries before the presumed time of Moses, the traditional author of the Pentateuch. The working hypothesis of Wellhausen and Delitzsch remained the dominant model for Pentateuch studies until the last quarter of the 20th century, when they were challenged by scholars who saw more and more sources for the Biblical text.

Following the secular approach to Bible criticism, several attempts were undertaken to rationalize the miracles associated with the exodus from Egypt, and to suggest geological, biological and meteorological explanations for their occurrence. Barbara Sivertsen's *The Parting of the Sea* is the most recent in that series. In this book Sivertsen systematically follows the list of irregular or supernatural events mentioned in the Biblical books of Exodus, Leviticus, Numbers, Deuteronomy and Joshua, and tries to correlate them with possible occurrences of volcanic eruptions, earthquakes, tsunamis and plagues that might have taken place in the Levant during the 4th millennium BP.

The book consists of an introduction, 11 chapters, an appendix, notes, a glossary, an extensive bibliography and an index. It presents two basic sets of data—archaeological and geological—and merges these data-sets to draw apparent historical conclusions. The author shows that movement of merchandise and armies between Egypt and Canaan, in both directions, was commonplace in the 4th millennium BP. Furthermore, she also presents evidence that an exceptional geological event—the eruption and explosion of the volcanic island Santorini—affected the Aegean province some 3600 years ago, and argues that it might have affected the environment in Egypt as well. Going systematically through the Bible books 2–6, the author tries to explain the miracles as natural phenomena. The burning bush is a volcanic eruption in north-west Arabia; the ten plagues inflicted on Egypt are various outcomes of the Santorini eruption; and the crossing of the Red Sea reflects the abrupt sea-level change caused by the tsunami generated by the collapse of the Santorini caldera. The phenomena associated with the handing down of the Law in Mount Sinai are explained as a geologically-recent volcanic eruption in north-west Arabia, and the crossing of the Jordan and the collapse of the walls of Jericho are linked to an earthquake along the central Dead Sea Rift, and so on.

In principle the occurrence of the geological phenomena described in Sivertsen's book is not impossible, but, in order to be woven into a single series of miraculous events, the author should have dated all these events, and demonstrated that indeed there is a series of natural features which follow the descriptions in the scriptures. Arguing that a miracle described in the text is not impossible in principle, without presenting independent physical supporting evidence, is not a very convincing argument.

However, the main weakness of the book is not in the absence of accurate dating of some volcanic eruptions

in north-western Arabia. The book does not tackle doubts expressed in modern archaeological research as to whether the exodus, and all the associated events described in the biblical books of Exodus, Leviticus, Numbers, Deuteronomy and Joshua, actually happened. In spite of intensive archaeological research during the last 150 years, no convincing evidence has been found to support either a mass expulsion of people from Egypt, or any of the plagues, or the handing down of the Law, or the Israelites' invasion into Canaan. Feeble evidence for the Santorini eruption, encountered by Stanley and Sheng (Volcanic shards from Santorini (Minoan ash) in the Nile Delta, Egypt, *Nature* 320 (1986), 733–5), or on Mount Eratosthenes south of Cyprus (Robertson *et al*., *Initial Results of leg 160 of the Ocean Drilling Program*, College Station, Texas, 1996), does not support a direct association between the Exodus phenomena and the Santorini eruption. The possibility that not only the volcanic ash but stories about the huge eruption are the source of some of the Exodus miracles (and stories travel well and improve with time) is not discussed in the book. The absence of reliable archaeological finds to support the Biblical account of the exodus, from the parting of the sea to the conquest of Canaan, is the basis of many archaeologists' doubts as to whether the exodus indeed took place (Finkelstein and Silberman, *The Bible Unearthed*, New York, 2001). This possibility is also not discussed in this book.

YOSSI MART
Haifa University, Israel

Die Antike und das Meer

RAIMUND SCHULZ

265 pp., 10 b&w illustrations

Primus Verlag, Darmstadt D-64283, Germany, 2005, €12.90, ISBN 3–89678–256–8

The fascination of the ancient cultures around the Mediterranean and the development of ships and navigation along its coasts and across its waters has attracted poets, writers and scholars since Homer's time. Numerous articles and books have been published on these themes over the years. This one covers 2000 or so years of Greek and Roman maritime history. Orthodox views are aired and new interpretations of previously accepted 'facts' are challenged. The latter includes the supposed invention of the *corvus* ('bridge' for boarding a ship) by Duilius, which proves more a myth than an effective naval innovation. Schulz makes no use of the *Olympias* and *Kyrenia II* experimental reconstructions, though they are of major importance for his subject. Wreck investigations such as Uluburun are not mentioned at all, although researches carried out on them give unparalleled insights for ancient maritime history and trade.

This, I consider, is a major weakness of the book. Moreover, the illustrations are fairly carelessly chosen. To take one example, fig. 4 shows the reconstruction of the bow of a 5th-century-BC trireme—but it reflects the state of nautical archaeological knowledge of the early-20th century AD! Just have a look at the clumsy ram. None of the nine other illustrations is integrated or discussed in the text. The influence of the sea on ancient art is not Schultz's expertise, and he neglects its enormous influence.

At least a basic knowledge of the Greek and Latin languages (not to mention German) and of classical history is indispensable to follow such ideas, and problems which are only just touched on. On p.17 Schulz retells the episode of Ulysses calling himself 'Nobody'. Readers need to realise that this is a pun on Greek *'ou tis'*, meaning 'nobody', which the author does not explain. Six hundred and seventeen endnotes and 12 pages of bibliography guide the reader through the mass of facts and interpretations. A critical look at the entries, however, reveals several major omissions: L. Casson and J. Morrison are each listed only by two secondary, popular works, whereas *Ships and Seamanship in the Ancient World* and *Greek Oared Ships*, both standard reference works, seem unknown or ignored by Schultz.

The last two chapters, however, are a subtle analysis of psychological attitudes and questions relating to 'maritime' culture and mentality as fundamental for language, literature, architecture, arts, lifestyle and even our philosophy and morals—a survey of variable perceptions of the sea and seafaring. The sea is beauty and cruelty; it is rewarding and challenging. These musings ensure that Schultz's book makes thought-provoking reading. It offers a promising study of the forces behind the events in the 2000 years of Mediterranean seafaring history, which have substantially influenced not only political developments as seen today, but also literature and art. The last, however calls for another, separate work, preferably in English or with an ample English summary

ARVID GÖTTLICHER
Bremervörde, Germany

El Vaixell Grec Arcaic de Cala Sant Vicenç

(*Monografies del CASC* 7)

XAVIER NIETO and MARTA SANTOS with 35 Contributors

463 pp., 406 figures

Centro d'Arqueologia Subacquàtica, Museu d'Arqueologia de Catalunya, Pedret 95, Girona 17007, Spain, 2008, €12 (sbk), ISBN 978–8439376514

This volume is the very full report on the excavation, in two 2-month seasons in 2002 and 2004, of a shipwreck

datable to 520–500 BC. Cala Sant Vicents (as it is called in Spanish) is a bay near the northern tip of Majorca, quite suitable for ships to enter and moor or beach, though with some submerged rocks inshore which probably caused the loss of the 6th-century ship. The site lies 6 m deep, under deep sand and a thick layer of stones from a nearby bluff. The excavators' conclusion is that the ship was anchored in the bay, but broke free and ran on to the shallow rocks. In general, although this is the first wreck of its kind to be found in the Balearics, it is thought to be consistent with other evidence for expansion of Greek trade along the southern coasts of Iberia in the last years of the 6th century BC.

With dimensions estimated at 20–22 m long, 6.3 m beam and *c*.2.1 m depth of hold, this is the largest wholly-sewn Greek ship yet to be studied. Insufficient of the hull was preserved to enable reconstruction of the lines or certainty about the lading—all that was left was parts of nine strakes and four frames. It seems the frame-timbers had been re-used (being of *Pinus pinea*, the other elements of *Quercus*). A false keel (or shoe) was fastened to the bottom of the keel by false tenons. The frames are similar to those from other archaic wrecks (fastened by lashings and made up with hook-scarfs pinned by treenails). It has to be said that, while the underwater photos are excellent and some of the wood diagrams clearly drawn, the explanation of the ship's construction is often opaque and could have been less wordily, more diagrammatically, set forth.

The section on 'Dimensions and Tonnage' (in French) by Patrice Pomey emphasizes the large scale of the surviving hull components—it is the biggest ancient Mediterranean ship yet to be found which was assembled entirely by ligatures. Only in the (slightly later?) wrecks of Gela 1 and Grand Ribaud F, where planking assembly involved false tenons as well as, or instead of, sewing, are ships of equal or larger size found—and these seem to represent a new phase in maritime trade, with long-distance, specialized cargoes, as opposed to small coasters.

A fine range of amphoras (mostly broken) came from north-east Iberia, from southern Italy, and from Greece and the north Aegean. The cargo also included bundles of iron tools, some tin ingots, baskets and grain-rubbers. Personal items found include a necklace of glass beads. There is quite a lot of tableware, much of it 'Ionian bowls', as well as Black-Varnish, Black-Figure (no figures!), Massiliot, etc., pottery, and various lamps and mortaria. There is some cooking ware, and a pierced ceramic disc of a widespread type which here might be a net- rather than a loom-weight. The Greek amphoras and fineware are important for the dating of Cala Sant Vicenç. The Iberian amphoras are an important group from this closed context and seem to derive entirely from an area close to Emporiae, constituting an important document for the story of this traffic, which seems to have involved elite redistribution in Majorca. Objects which receive special study are a basket-lined bronze helmet, and a much-travelled (and repaired) ladle. Small finds include a goldsmith's mould, a carved wooden box-lid like that from Giglio Campese, and a bracelet of lignite.

The site was revealed by dredging sand from the bay to restore the storm-denuded adjacent beach. The sand later returned to obliterate the wreck, and, failing further regional or local sponsorship, the wreck will remain only partially excavated, and for the most part not raised. There are some fine drawings and photos of the underwater excavation, and some photos of hull-components, but it has to be said that the stratigraphy and the details of the hull are not as fully explained as one would wish. This is exacerbated by the absence of captions or technical discussions relating to the dig and the ship-remains in any language other than Catalan. The authors have included some shipbuilding terms in several languages (in footnotes), but what the international reader requires is, at the least, long captions in a non-Catalan language, preferably English. There is a summary of 'Conclusions' in both Catalan and Castilian, and some of the scientific contributions are in other languages; however, for the detailed interpretation of the site and the ship-remains on an international level (which the importance of the site requires) it is as if a wreck in south-west England were to be published in Cornish, or on Malta in Maltese—locally admirable, but for wider study, hopeless.

The volume under review has been generously resourced, most aspects of the site have been thoroughly researched and written-up, and the project has been most earnestly and efficiently brought to publication by the main authors, a credit to the Centro d'Arqueologia Subaquàtica de Catalunya and its backers. Researchers from many fields will find material here; all the wider audience needs is more marine-archaeological detail and argument in an accessible language.

A. J. PARKER
Redland, Bristol, England

The Sea of Galilee Boat

(*Ed Rachel Foundation Nautical Archaeology Series*)

SHELLEY WACHSMANN

424 pp., 90 b&w photos, 32 line drawings, 2 maps

Texas A&M University Press, College Station, TX 77843–4354, USA, 1995 and 2009, $23 (sbk), ISBN 978–1603441131

The Sea of Galilee Boat relates the discovery of the shipwreck by two Israeli brothers, Moshe and Yuval Lufan; its excavation, headed by Israeli underwater archaeologist Shelley Wachsmann (now Meadows Professor of Biblical Archaeology at Texas A&M University); and its transport to Yigal Alon Museum in

Kibbutz Ginosar, where it underwent conservation and is currently on display. Addressed more to a general audience than to the professional archaeologist, it is a 'whodunit' work for which the archaeology of the boat, Biblical gospels, and other historical sources, including Mark Twain's writings of his voyages on the Sea of Galilee, provide an engaging context. Wachsmann argues that the Sea of Galilee Boat was of the same type mentioned in the Gospels and employed by the disciples of Jesus, as well as the same type of boat used by the Jews to fight the Romans during the battle of Migdal. While there is no archaeological evidence to support this assertion, Wachsmann makes the point that the Gospels are records of the exceptional and on the whole omit the mundane. Wachsmann also asserts that the Sea of Galilee Boat, a type of vessel commonly used in fishing activities on the Sea of Galilee, was probably the largest type of such boat found on the lake at that time.

The book lays out the exceptional series of events engendered by the boat's discovery, with machine-guns, military helicopters, and political/religious conflict all making an appearance. For example, Wachsmann details how he and his team arrived on site one day to find people from the agricultural group Moshav Migdal guarding the site with loaded guns, believing that the site was political gold. They obviously underestimated the delicate nature of excavation and conservation required before the boat could be put on display. Wachsmann uses the engrossing technique of alternating chapters between discussions of the archaeological activities taking place around the boat, and detailing the historical context from which the boat sprang. In this way he brings the reader in and out of the past, showing how the past both contextualizes and informs current activities and regional social/political dynamics. Throughout the book, Wachsmann's thoughtful style of writing propels the reader forward, while his use of wordplay adds to the work's humour.

Wachsmann makes the point that much of archaeology—rescue archaeology in particular—is improvisational, and the Sea of Galilee Boat excavations certainly demonstrate this. Probably the most humorous example of such improvisation relates an instance when the conservation tank became a breeding-pond for some mosquito larvae. After considering the use of several different types of pesticides, and fearing that these might have adverse affects on the conservation process, Moshe came up with the ecologically-correct answer by stocking the pool with goldfish, which 'merrily gobbled' every last squirming larva.

On more of a technical note, the book is exceptionally comprehensive, including a discussion of the 12 different types of wood used in the boat's construction, the anchors it may have carried, the size of its crew (at least five— four oarsman and a captain), and the type of sail used to propel the boat (a single square-sail on a mast supported by fore-and-aft stays). It also contains a glossary for those who are not familiar with nautical terms. The publication is well served with black-and-white line drawings helpfully illustrating events and concepts in the text. It is error-free, with the exception of what seems to be a printing mistake—a sentence left out between pages 279 and 280. Additionally, the paperback binding is of rather poor quality. Pages began to fall out of the book half-way through reading it.

The book's moral seems to be that archaeology is not about finding gold, which many of the locals believed the boat to have carried, but rather that a really 'old boat' can be a treasure to many—to archaeologists, to researchers and to political and religious groups, depending on how the site is treated and interpreted. In this respect Wachsmann should be applauded for exploring the many avenues of interpretation that could be applied to the Sea of Galilee Boat. His book has brought its archaeology to the people in a fun and well-informed way.

CLAIRE P. DAPPERT
Washington DC

Wulfstan's Voyage: the Baltic Sea region in the Early Viking Age as seen from shipboard

(*Maritime Culture of the North* 2)

ANTON ENGLERT and ATHENA TRAKADAS (eds)

347 pp., *c*.150 illustrations with many coloured maps, 10 tables

Viking Ship Museum, Roskilde, DK-4000, available via Oxbow Books, 10 Hythe Bridge Street, Oxford OX1 2EW, UK, 2009, £53 (hbk), ISBN 978–8785180568

This is the eagerly-awaited companion volume to *Ohthere's Voyages* (2007) (reviewed in 37.1 (2008), 194–5), and as such the second book in the Roskilde Viking Ship Museum's new monograph series 'Maritime Culture of the North'. It is a collection of essays discussing matters arising from the second part of a passage added to the geographical section of the Old English translation of Orosius's *Historiae*, the first part of which is the subject of the previous volume. Although the text on Wulfstan is much shorter than that on Ohthere, it has nonetheless produced an essay collection almost twice as long (though fortunately not twice as expensive).

While the extreme parts of Ohthere's and Wulfstan's voyages are far apart, the accounts overlap in Danish waters, and especially in Hedeby, the finishing point of Ohthere's voyages and the starting point of Wulfstan's. Consequently, some of what is said in the new volume is also of interest to students of the Ohthere text, most

notably a long and detailed discussion of 9th-century Hedeby itself. With this in mind, it is tempting to regard these two volumes as parts of the same work in much the same way that the Old English voyage accounts are ultimately part of the same text. They can be enjoyed separately, but are best read together.

The volume starts with a close look at the Old English text itself. Fortunately, although the insertion into Orosius (both Ohthere's and Wulfstan's reports) was already edited in full in the previous volume, the passage concerning Wulfstan's voyage is here repeated, first in facsimile, then in both edited Old English and translation, along with some relevant extracts from Ohthere's report and with commentary on some names. This is followed by a discussion of the language of the Wulfstan passage in particular (by the text's editor, J. Bately), of Wulfstan's identity (by J. Jesch) and of the text's place in contemporary geography and travel literature (in two essays by R. Simek and P. Urbańczyk).

The second section (also the longest) is concerned with the geography and political make-up of the southern Baltic Sea in the 9th century. The section begins with discussions of the ethnogenesis and socio-political structures of the peoples inhabiting the region, Baltic, Slavic and Scandinavian (by C. Lübke with a note by P. Urbańczyk, and by W. Duczko, respectively). After this, S. M. Sindbæk discusses the nature of long-distance traffic and the reasons why some places are mentioned in the account while others, despite being well-known archaeologically, are not. The next seven essays provide in-depth treatment of the harbours and trading places along Wulfstan's route. In recognition of the recurring argument that Wulfstan's report may not be the account of a single voyage, many places are discussed which the Old English text only mentions in passing, if at all. The discussions start at Hedeby (V. Hilberg) and go east from there, taking in the Danish archipelago and Skåne (two essays by J. Callmer and J. Ulriksen), Bornholm (A. Nørgård Jørgensen), the mainland coast of modern-day Germany (H. Jöns), the destination port of Truso on the Vistula (M. F. Jagodziński), and finally the Baltic areas, for which Truso provided the gateway (V. Žulkus and M. Bartašius, in German).

The third section is dedicated to seafaring. It opens with an exposition on transport zones, their significance for shipping routes and vessel types, placing Wulfstan's journey in the context of this theoretical approach (C. Westerdahl). This is followed by a paper introducing the *Cosmography* of Aethicus Isther, an 8th-century Latin text, which appears to contain anecdotal information on the Baltic Sea area, but is rarely studied in this context. It is particularly interesting in its reference to ship-types, using a number of Latin words not known from classical and Mediterranean texts. With a view to identifying the kind of vessel Wulfstan may have used, O. Crumlin-Pedersen goes on to discuss the boats in use in the region at the time (and also slightly later). He begins by giving an overview of archaeological finds in turn from Denmark, Southern Sweden and Norway, from the Slavic coast, and from further east as well as Central Sweden, going on to compare and contrast this with the evidence from the North Sea catchment, before asking whether ships might have been brought east from the North Sea. A. Englert (one of the editors of this volume) and W. Ossowski then present the results of a 2004 trial voyage from Hedeby to Gdańsk using the replica of the 11th-century trading vessel Skuldelev 1, analysing the crew's observations as well as openly discussing the reasons and implications of using a much later ship. Navigation and seamanship are the subject of two further essays. The first draws attention to our lack of knowledge of the potentially quite different geography of parts of the Baltic Sea coast at the time and its implications for studying methods of terrestrial navigation (S. McGrail). The second, much longer, one uses a wide range of ethnographic, experimental and theoretical material to show how much can be deduced about ancient navigation all the same (G. Indruszewski and J. Godal, with M. Vinner).

A shorter final section discusses voyaging in the southern Baltic Sea at Wulfstan's time, its purposes and dangers. It starts out with an essay about trade in the Baltic Sea area, concentrating on coinage, exchange values and their implications for the development of trading places (H. Steuer). This is followed by a pair of essays discussing the Christian missions. The first of these deals with south-east Scandinavia (J. Staecker), opening with the *Vita Anskarii*, which contains the other contemporary report of a voyage in the region; the second goes on to show evidence from the Slavic coast (F. Biermann). J. Bill wraps up the section with a discussion of piracy and maritime safety, the extent of the risk and the measures taken to avoid it. The volume closes with a summary by M. Müller-Wille.

The result of these efforts is a thorough interdisciplinary study of the southern Baltic Sea in Wulfstan's time, reaching far beyond the limitations of the short Old English texts. It is also an impressive exercise in international co-operation, with the participation of scholars from all the modern countries touched upon by Wulfstan's account, and others from as far afield as England (his probable home) and Lithuania (within reach of his destination).

Like the Ohthere volume, and indeed as usual with VSM publications, the book is beautifully produced and richly illustrated (partly in colour), and it retains the tried-and-tested layout with two columns of text plus an inner margin for notes and captions. The main difference is the decision to retain each article's separate bibliography, rather than integrating them into a single bibliography at the end; a feature which had seemed quite useful in *Ohthere's Voyages*. The index has added a useful category on ship terms (besides names and general information), but again is rather short. These, however, are minor points which may

well fall within the realm of personal preference. They are far outweighed by the value of the content for scholars of the Baltic Sea region in the Early Viking Age, in any discipline.

KATRIN THIER
Oxford, England

Sutton Hoo and its Landscape

TOM WILLIAMSON

154 pp., 69 illustrations and maps, some colour

Windgather Press, 10 Hythe Bridge Street, Oxford OX1 2EW, UK, 2008, £20 (sbk), ISBN 948–1905119257

Within a mere 144 pages of text the author, Professor of English Landscape History at the University of East Anglia, has included a most useful synthesis of research on Suffolk's famous Anglo-Saxon ship-burial site. In recent years Sutton Hoo has attracted a plethora of publications, and Tom Williamson deftly extracts the key themes and hypotheses for us. He is particularly keen to counter phenomenological approaches which 'if adopted uncritically, can easily become no more than exercises in misinformed speculation'. He hopes that the central section of his book will at least represent an exercise in partially-informed speculation. Having counselled caution throughout, he sets aside one chapter in which he allows himself to propound some theories of his own, demolishing a few others in the process.

Elucidated by a series of coloured maps, the meat of the text is a careful study of the area surrounding Sutton Hoo covered in a field-walking survey. The woodland today is much more extensive than in the past. Having demonstrated that the enclosures, settlements and tree-cover were largely influenced by the poor soils of much of the Sandlings peninsula, Williamson sets out to answer the question why the burial mounds were located there. This task takes him beyond the immediate vicinity to map the countrywide distribution of significant artefacts and place-names. He first defines the extent of Anglian settlement and, secondly, provides possible reasons for a power-base to have been located here at its south-eastern tip.

For readers of this *Journal* the relevance of the book does not lie in Williamson's observations on the ship buried beneath the largest mound—he describes it as having had a 'steering paddle' rather than the quarter-rudder evinced by the shape of its 24th rib—but by his study of the eastern bank of the River Deben on which the site lies. Nowhere is the term used, but clearly a maritime cultural landscape is being defined *de novo* by a land-based scholar, 'travelling by land along the coastline these great interruptions in an otherwise topographically uneventful countryside thus make a profound moving impact on the observer: and it is hard to believe they would not always have done so.'

Lacking the concept, the author has bisected the maritime cultural landscape of the Deben: the west bank is ignored. As a result two places, candidates for important contemporary settlement and which possess fertile soils, rising ground and now filled-in creeks, are not discussed. These are Melton, which lies opposite the burial-site and produced a sadly unprovenanced 6th-7th-century gold-and-garnet mount, and the strand of Woodbridge slightly downstream of it. This omission leads Williamson solely to conclude from his careful consideration of restricted distant visibility that 'the view of the Sutton Hoo cemetery from the river was thus less important than the view of the river from the cemetery'. Despite its limitations from a maritime archaeologist's viewpoint, the book can be recommended as a succinct context for the ships buried at Sutton Hoo.

VALERIE FENWICK
Blaxhall, Suffolk, England

The 'Old Ships' of the 'New Gate', vol. 1 Yenikapı'nın Eski Gemileri, Cilt I

(parallel English/Turkish texts)

UFUK KOCABAŞ (ed.) with nine Contributors

323 pp., 232 colour illustrations, 15 line drawings, 35 tables, 4 maps

Ege Yayinlari/Zero Books Ltd, Abdullah Sokak 17, Taksum, 34433 Istanbul, for Istanbul University Yenikapı Shipwrecks Project, 2008, €70 (hbk), ISBN 978–9758072163

In this first volume of a planned series dedicated to presenting the Byzantine-era shipwrecks of Yenikapı, editor Ufuk Kocabaş co-ordinates an introduction to three years of archaeological excavation at a complex site in the heart of ancient Constantinople and modern Istanbul. As noted in presentations at the recent 12th International Symposium for Boat and Ship Archaeology (ISBSA) nearby, 34 shipwrecks survived in deep silt that gradually choked the ancient harbour built by the emperor Theodosius (*c*.379–395 AD). The oldest site in Istanbul (6th millennium BC), early city walls (4th century AD), limestone quays, and wooden piers also emerged from the dark, rich soil at the site, now a kilometre from the sea.

Istanbul Archaeological Museums has responsibility for excavations within the city, and when a massive infrastructure-building project to bring rail and metro transportation began, the archaeological component played a critical role. Four stations will be linked by rail laid under the ancient city and more than 50 m below the Bosporus in a plan to connect the city's European and Asian sectors. The Turkish Ministry of Transportation and the Metropolitan Municipality of

Istanbul so far have experienced a two-year delay and a major re-design of the Yenikapı station as a result of their commitment to the preservation of cultural heritage at the port site.

Istanbul University's Department of Conservation and Restoration began fieldwork at Yenikapı in 2006. This introductory volume provides a general discussion of their approach, methods, and preliminary data for 10 of the 26 shipwrecks under their stewardship. Additional wrecks have been found since the manuscript went to press, bringing the total to 34 as of October 2009. Cemal Pulak and other archaeologists and students from the Institute of Nautical Archaeology (INA) excavated, recorded, and are separately analyzing and conserving eight Yenikapı ships at INA's Bodrum campus. The next volume in the series will present the other IU ships in similar format, and plans are in place for the detailed publications of each individual ship and associated artefacts.

The scale of the project is immense, and the extensive description of the Marmaray project (a combination of Marmara and *ray*, meaning 'rail' in Turkish) and its origins will be of interest to anyone curious about transportation issues, maritime and otherwise. The Yenikapı site covers approximately 58,000 m^2 (*c*.14 acres), and more than 600 people worked there daily, including a team of 25 archaeologists and 15 students in addition to some 550 labourers. Its scope is comparable to the major construction under way at Oslo's medieval and early modern harbour of Bjørvika, where a similar number of shipwrecks and harbour structures are under excavation by the Norwegian Marine Museum. Conservation laboratories have been set up near the site, where students and archaeologists now are working with FARO-arm technology to provide digital images of timber details for analysis and reconstruction.

Seven chapters with a glossary, but no index, orient the reader to the context of the site within ancient Constantinopolis and the metro construction project, with a brief description of the harbour milieu, including references to harbour breakwaters and mention of the vivid interpretations of geological events. Text-based reconstructions of the economic and social setting of harbours in Late Antiquity follow. There is no integration of artefacts from the Yenikapı site in the discussion, as this volume focuses on hull-remains. Breakwater construction, geological reports and faunal analysis are published separately elsewhere, in Turkish.

The third and fourth chapters delineate recording and conservation procedures, including the 'hamburger method' for lifting. Data forms are included, as is a flow-chart for the documentation process and precise descriptions of the incredible organization mandated by the salvage nature of excavations that produced hundreds of thousands of artefacts, from nails and ceramic sherds to cargo ships which sank while loaded with wine jars. In general, the recording process began with standard survey procedures, including triangulation by hand and total station, direct measurements, and measurements of *in situ* features from nail-holes to sheer-planks. Photographs, sketches and comments made in the field were augmented by full-scale drawings made by hand and further written remarks. Project managers decided to work on two shipwrecks at the same time in order to facilitate efficiency, taking cross-sections of the hull both for future reconstruction and to serve as patterns for a variety of creative lifting techniques for waterlogged planks and other ship parts.

Digital data storage and processing contributed to the production of AutoCAD drawings, followed by the use of PhotoModeler to generate three-dimensional digital models and the construction of photomosaics, beautifully reproduced in the following chapter. As noted by I. Kocabaş, the photomosaics are most helpful for a general perspective as their accuracy is less than that of properly executed plans and drawings. I did not entirely understand the explanation on p.49 of a process that involved printing out drawings generated by total station measurements, tracing over them to soften curvatures, and scanning that drawing to use as primary documentation, sometimes to be redrawn with AutoCAD (p.51). The built-in acquisition of redundant measurements and the abundance of total-station points will serve as a significant reservoir of data as the process of further recording, analysis and eventual reconstruction occurs.

Of course, the tremendous value of this assemblage of hulls is that it provides a number of associated watercraft which will ultimately be well dated and thoroughly described. No dates are offered for any of the wrecks, but they probably range from the 7th to 11th centuries, based on construction features and associated ceramics for the two that sank with cargo aboard. The Yenikapı remains presented in ch. 5 are divided in two categories: galleys (1) and 'trade' ships (9), including small cargo or fishing boats of 8–9 m (YK 6, 9, 12), medium cargo ships of 10–12 m (YK 7, 18, 8), and larger ships of 17–19 m (YK 15, 17, and 3). The preliminary reporting of context, associated finds, and details of hull-construction, accompanied by measurements of individual features, photomosaics, and labelled plans, permits easy access to the basic data. The investment of time, money, and effort by the archaeologists and staff is amply repaid by this presentation. It will serve as an inspiration to many students and programmes on an international scale.

As noted by the authors of ch. 6, the Department of Conservation and Restoration at Istanbul University is Turkey's first academic institution focused on archaeological analysis and conservation. Other laboratories at excavations and academic institutions exist, and have trained many Turkish students and scientists, but IU has dedicated special resources and launched inde-

pendent surveys and excavations as well. A technical description of the laboratory and plans for PEG-based treatment of the ship remains is complemented by descriptions of proposals for the new Yenikapı museum and photographs of European ship museums. In the final chapter, U. Akkemik's analysis of 148 wood samples from the Yenikapı 12 wreck featured on the cover suggests it was built from local forests of walnut (floor timbers), ash (bulkheads and futtocks), chestnut (planks), oak (treenails and ceiling), and hornbeam (keel and dowels).

In many ways, this volume is a celebration of the project's achievements to date. The bilingual publication itself is a manifestation of the effort made by project directors to provide public access to the discovery and its archaeological implications. Explicit discussion of, for example, the Turkish labelling system for hull components, will be of less interest to ship scholars than the arrangement of those components, but is necessary to permit both English- and Turkish-speakers to grasp immediately the meaning of abbreviations in the many photographs and plans. There are a number of insignificant grammatical and translation errors in the English text, and a few that impede comprehension, such as 'seam planking' for sewn planking in a description of the Khufu ships, themselves mistakenly described as the oldest plank-first vessels. 'Volumetric features' indicates hull components recorded by standard total-station mapping and contouring; 'visual remarks' refers to detailed written observations. The image on the cover, while arresting, is reversed. Reliance on secondary works is evident throughout in the limited bibliography, and in contextual discussions of hull-construction and even of Istanbul's archaeological past. Support from the Istanbul-Maslak Rotary Club permitted publication in large format, on glossy paper, with excellent graphic reproduction, fold-out plans and photomosaics, while maintaining a quite reasonable price, and this volume will make a tremendous addition to any library.

CHERYL WARD
Coastal Carolina University, USA

Empires of the Silk Road: a history of Central Eurasia from the Bronze Age to the present

CHRISTOPHER BECKWITH

472 pp.

Princeton University Press, 41 William Street, Princeton, New Jersey 08540–5237, USA, 2009, $35/£24.95, ISBN 978–1400829941

This is a very dense book. From the Hittites to the Japanese, from the Steppes of Northern Eurasia to India, and from the age of legends to the age of the European barbarians, it covers such an immense area and time that it is hard to take it all in. Indeed Beckwith himself concedes, in his Preface (p.xiii), how ambitious is his project properly to record the history of Central Eurasia, in view of the paucity of research on very many crucial topics. On the one hand, it is exhilarating to realize how much history still is to be recovered and written for the countries of Central Eurasia and their peoples. On the other, it is somewhat daunting to try to absorb just this one book, with so much tantalizing detail which, nonetheless, needs enormous amplification for every one of the peoples mentioned. He defines Central Eurasia to exclude Europe west of the Danube, the Middle East (the Levant, Mesopotamia, Anatolia, western and southern Iran and the Caucasus), South and South-east Asia (including India), East Asia (Japan, Korea and China) and the Arctic and sub-Arctic Northern Eurasia.

So why is this book interesting for the readers of this *Journal*? It radically alters the world view of the role of sea-trade and of seafaring peoples. A critical thesis of Beckwith's is that traditional Central Eurasia made fundamental, crucial contributions to the development of world civilization, enabled by the prosperity engendered from the ancient continental internal economy 'misleadingly conceptualised' as the Silk Road. The history of Central Eurasia, he argues, can to some extent by viewed as the successive movements of Central Eurasians and their cultures into the periphery, and of peripheral peoples and their cultures into Central Eurasia (pp.xx-xxi). With them they carried, in both directions, new ideas contributing to an extraordinary pace of innovation. It is not overstating the author's case to say that a proper understanding of the history of the world depends on appreciating the wealth of these civilizations and the consequent high development of their arts and cultures. Far from being the impoverished barbarians portrayed by the Europeans who took over their trade from the 15th century AD, they were dynamic creative peoples, ruthlessly dispossessed by the invading peripheral peoples of Eurasia. The development of sea-trade and the invasion of their lands by the littoral new arrivals was devastating. Viewed from this perspective, a lot of the history of the accomplishments of the great sea-trading nations has to be balanced against very serious losses to civilization as a whole wrought by the destruction of sophisticated cultures reduced to poverty and, in some cases, to near extinction.

Central to Beckwith's thesis is the view that the Silk Road was not just a route. It was a functioning economic system in which all the Central Eurasian communities were involved. It did not simply serve as a conduit of goods from East to West, but a whole mercantile exchange system between all the peoples of Central Eurasia. Thus the encroachment of Russia and

China and the agreements between them (1689 and 1727) establishing monopolies of trade resulted in the closure of that exchange route and ultimately impoverished the entire Central Eurasian economy. The Central Eurasian States paid little attention to coastal trade and did not hire foreign mercenaries to help them control their own littoral trade. The Portuguese, on the other hand, depended heavily on local expertise—Asian pilots, cartographers, merchants, and others throughout their expansion. Ultimately Portugal, Spain, the Netherlands and the United Kingdom acquired or opened trading ports and naval bases almost at will all around Eastern Eurasia from Persia to Japan (p.242). The economy thus changed from one focused on the continental-based Silk Road system, with an auxiliary sea-based system in the Eurasian littoral, to a coastal littoral system alone. 'Central Eurasia disappeared' (p.233).

It is clear that many stereotypes of Central Eurasian peoples need to be abandoned and a new understanding of the importance of these peoples developed. Fortunately recent archaeological studies in many of the areas of Central Asia are already beginning to show the importance, at a very early age, of the sophistication of their cultures and of their innovations in agriculture, irrigation, textiles and so on. Maritime historians may need to reconsider some presumptions about Europeans as the bearers of civilization in the last few centuries to the poverty-struck, and powerless, descendants of the great Steppe Empires. They may not learn a lot about the early Asian maritime trade from this book, but it will certainly change some perspectives.

LYNDEL V. PROTT
University of Queensland, Australia

Serçe Limanı, Vol. II: the glass of an eleventh-century shipwreck

G. F. BASS, R. H. BRILL, B. LLEDÓ and S. D. MATTHEWS

544 pp., 44 colour, 100 b&w photos, 1000 drawings, 17 plans, 3 maps, 12 tables

Texas A&M University Press, College Station, TX 77843–4354, USA, 2009, $150 (hbk), ISBN 978–1603440646

Thirty years after the excavations of the early-11th-century-AD shipwreck at Serçe Limanı were completed, the second volume of the Serçe Limanı publication has appeared. It is dedicated to the study of the glass carried as cargo on the ship. The reason for the gap between the end of the excavation and the publication is obvious, as the cargo from the ship found off the southern Anatolian coast north of the island of Rhodes consisted of an enormous amount of glass—two tons (hundreds of chunks) of raw glass and one ton (between half-a-million and a million sherds) of broken glass, as well as 80 intact glass vessels. To study such a large corpus has required enormous expenditure of effort, both in the sorting of the fragments and the reconstruction of the vessels and in their subsequent classification into types. The vessels were then drawn and studied in detail by various scholars. Finally, the distillation of this volume from the results of the numerous detailed studies has involved a lot of editorial work. One therefore has to congratulate the authors and the editor for having undertaken this monumental work and for producing a most impressive volume which presents the wide range of glass found in the shipwreck in great detail. This is by far the largest published assemblage of Islamic glass of the early-11th century. The well-dated and undisturbed context of the shipwreck makes this a work of reference of the highest importance for Islamic glass studies.

The volume is divided into 14 parts with a total of 45 chapters. In two introductory chapters Frederick H. van Doornick Jr. and George F. Bass present a summary of the interpretation of the voyage of the small Byzantine merchant ship that sank at Serçe Limanı in the third decade of the 11th century, and of the methods of excavation, conservation and study of the glass. The second chapter is important for the interpretation of the glass as it demonstrates that the glass was already broken when it was loaded as cargo on the ship and was therefore transported as 'cullet' for re-melting in a glass-workshop at its final destination. This conclusion is convincing and is based on two observations, firstly, that adjoining glass sherds came from widely-separated areas within the cargo space and were seldom found close together, and secondly, that in no instance were all the sherds of any one vessel present as part of the cargo when the ship sank, except for the 80 intact items which were found in the living-quarters at the bow and the stern of the ship.

An important study for the understanding of Islamic glass technology is presented by Berta Lledó and Sheila D. Matthews in ch. 3, which describes the different moulds used to produce the mould-blown glass found on the shipwreck. The chapter includes not only the discussion of the different patterns and individual decorative elements, but also the important issue of mould siblings, providing lists of glass vessels of different shapes which were blown into the same mould. The mould-blown glass vessels from the Serçe Limanı shipwreck were all blown into a dip mould, then removed from the mould and further inflated into their final vessel shape. This technique explains the existence of mould siblings in different shapes and indicates large-scale production of mould-blown Islamic glass as a cheaper and faster way to decorate glass vessels than cutting.

In chs 4 to 41 the glass vessels found among the cargo of broken glass, including the 80 complete vessels in the living quarters of the ship, are described

in detail. From the glass fragments, 5000 vessels have been identified and catalogued, but the actual number of vessels present in the cargo was almost certainly more than 10,000 or perhaps nearly twice as many. The glass vessels have been arranged in typological groups according to their forms, ranging from beakers and cups to plates, dishes, bowls, bottles, ewers, jugs, jars, lamps, cupping-glasses, alembics and stemmed vessels. In addition, some crown glass windows, rods and other objects are also attested. Among the 5000 vessels identified and catalogued, bottles (1400) and beakers (1250) are the dominant forms. Bowls (607) and jars (421) are also fairly common, with smaller numbers of lamps (247), dishes (148), pitchers (93), cups (66), cupping glasses (33) and alembics (23). Among the 80 complete vessels, 26 disk-rim bottles are the principal form, followed by 19 beakers and 11 scent sprinklers and six cups, while perfume flasks, jugs, ewers and bowls are less frequent. However, only future research on Islamic glass assemblages from other sites can establish whether the Serçe Limanı glass assemblage is representative of the glass generally used in the early-11th-century Islamic world or whether it only reflects the production range of the glass-workshop from which the broken glass derived.

The detailed presentation of the Serçe Limanı glass assemblage, which includes a large number of line-drawings and some colour plates, make this volume a key work of reference for further studies on Islamic glass of the 10th/11th century. A shortcoming, however, is the brevity of certain chapters, some of which present the glass finds of certain vessel forms without further discussion. However, thanks to the detailed descriptions in the catalogue entries, the volume can be used as a basis for further studies and interpretations. Some other chapters are the graduate theses of students written many years before the volume went to press, as Bass has pointed out in his preface, explaining that these former students should not be held responsible for the absence of later relevant publication references.

Nonetheless, some of these chapters would have benefitted from thorough reviewing and updating before publication. Certain of these statements should be regarded with caution, as in ch. 4, where two sherds from beakers with overlaid opaque glass decoration have been described as a 'marquetry' decorative technique, which is a misleading term and not used to describe ancient or Islamic glass decoration. The introduction and the conclusion of this chapter, written in 1988, would have benefitted from some updating, as the comments on beakers in the Late Antique and Islamic Eastern Mediterranean do not reflect the current state of research. Furthermore, the comments on the similarities of the lions on the beakers and the bottle with zoomorphic cut decoration with lions on the Hedwig glasses are only superficially relevant with regard to the posture of the lions, but not to the cutting techniques or the origins of the vessels, as has been pointed out by David Whitehouse in his afterword at the end of the volume. He has suggested that the zoomorphic cut-glass vessels from Serçe Limanı and similar glass vessels from Sabrah, Tunisia, are closely related and most likely to have been produced in the Eastern Mediterranean.

In ch. 42 Sheila D. Matthews and Berta Lledó present the raw glass and the factory waste found in the wreck. In particular, the presentation and discussion of the moils, the pontil and blowpipe knock-offs and crack-offs as well as the other factory waste such as trails, drops, test drops, lumps, rods, tubes, gathers or defective vessels offer an unique insight into the glassworking techniques of the early-11th century. This is a very interesting chapter which will receive much attention from scholars exploring Islamic glassworking processes in the future. Chapter 43, by Robert H. Brill, discusses the results of the chemical analyses of 103 samples from the Serçe Limanı glass. It is unfortunate that the number of analysed samples is relatively small in comparison with the vast number of vessels from the shipwreck, but the analyses confirm the archaeological interpretation of the origin of the glass as being Islamic. In the penultimate chapter, Bass presents a summary and general interpretation of the material. He makes the interesting suggestion that the broken glass was carried in baskets, although no traces of these survived in the seawater, as some were concentrated in lumps which may reflect the shapes of their containers. In support of this hypothesis, he refers to textual evidence from the Islamic and Byzantine world in which baskets for transporting glass on sea voyages were mentioned. Another noteworthy point is the argument that besides the glass, and stones carried as ballast, another cargo would have been needed to trim the ship. As no trace of this was discovered, he suggests that plant ash, now dissolved by seawater, may have been transported on the ship. Plant ash is mentioned in later sources as ballast transported from the Levant to Venice, but it is possible that it may already have been traded from the Levant to Byzantine glass-workshops several centuries earlier. Finally, he sums up convincingly the reasons for suggesting that the glass comes from a single workshop. These are that the analysed samples are chemically homogeneous, relatively few moulds were used to produce a variety of mould-blown vessels, and a large quantity of factory waste is present, all of which indicate a common place of origin for the cullet. The 80 intact glass vessels found in the living quarters of the ship are interpreted as pieces brought to the ship for sale by individual merchants on board, as seems to be indicated by the beakers found in stacks of three to five.

The final chapter is an afterword in which David Whitehouse points out the importance of the glass from the Serçe Limanı shipwreck as the largest known assemblage of Islamic glass and a well-dated 'time capsule'

which offers a unique insight into Islamic glass production of the early-11th century in the Levant. His contribution is the first attempt to put the Serçe Limanı glass into a wider historical and socio-economic context by summing up the state of research on Islamic glass-making and glass-working in the Levant, the region from which the glass cargo is most likely to have come.

More detailed studies of the socio-economic context are needed and it is anticipated that this volume, which presents the complete range of glass vessels found in the Serçe Limanı shipwreck, will be used extensively as an essential work of reference from now on, as it represents an excellent database of Islamic glass of the early-11th century in the Eastern Mediterranean. However, there are still many unanswered research questions. What does the transportation of cullet from the Levant to a Byzantine glass-workshop mean for Islamic and Byzantine glass production and trade in the 10th/11th century? It must be established more exactly where the ship with its cargo of glass was coming from and where it was going to, rather than accepting a general Levantine origin and a possible destination in the greater Constantinople area. This will presumably be explored in more detail in the forthcoming third volume in the series. Another research question to follow up must be the comparison of the quality and range of the glass found in the Serçe Limanı shipwreck with other contemporary glass assemblages from consumer sites in the Eastern Mediterranean, to expand our knowledge of Islamic glass production and consumption. As David Whitehouse points out, few of the cut and mould-blown glass vessels represent the highest quality of the glass of their time, and there seems little doubt that the Serçe Limanı glass reflects an assemblage of ordinary everyday glass which needs to be examined against other quantified and stratified assemblages from consumer sites of the same period.

DANIEL KELLER
Archaeology, University of Basle, Switzerland

Ships and Shipping in Medieval Manuscripts

JOE FLATMAN

144 pp., 156 colour illustrations

British Library, 96 Euston Road, London NW1 2DB, 2009, £30 (hbk), ISBN 978-0712349604 (£25.00, + free UK p&p if ordered online at www.bl.uk/shop and enter the code BLIJNA in the voucher box before checking out; terms and conditions apply, valid until 30/04/10).

The scope of Dr Flatman's beautifully-illustrated book is much wider than the title suggests. The author states that its aim is to explore the 'medieval perception of the maritime world', although even this understates the range that it covers. Despite the title, the book is really about how medieval manuscript artists represented human activities on, and in, both salt and fresh water.

The 156 vivid colour illustrations, drawn mainly from the manuscript collections of the British Library, are the stars of the work, and a joy to browse through. However, this is no mere 'coffee-table' piece, and has a serious analytical purpose. The book contains some familiar images, such as the early-14th-century cog battle, or the 15th-century Beauchamp Pageant carracks, but also includes many that will be much less familiar, even to students of medieval shipping. The standards of reproduction are generally very high, although one image does give an impression of being very slightly out of focus.

There are four chapters. Chapter 1, 'Seeing Pictures, Talking Images', explores the history and nature of medieval illustrated books, reviewing the types of works produced by medieval scribes. The author reminds us that illuminations were more than mere decoration and were meant to 'illuminate' a text for a reader, to jog the memory or to help understanding. He also points out that such texts were expensive, and prepared for very limited audiences, churchmen and the aristocracy at first, later followed by educated and wealthy commoners. Although illuminated manuscripts were produced after 1500, they were gradually eclipsed by the growing popularity and availability of the printed book.

Chapter 2, is entitled 'Water, Creation and Damnation' and is about what the illuminations may be able to tell us about medieval ideas regarding the sea. Dr Flatman contrasts medieval views of the marine environment—seldom ever seen as less than threatening, at worst synonymous with Hell or chaos—with supposedly more positive 'prehistoric attitudes to the oceans'. The evidence cited for the more 'positive' prehistoric attitudes appears to derive from Scandinavian research into ship imagery, which suggests that ships were seen as symbols of power, status, loyalty and other positive attributes. This reviewer would caution against being too 'positive' about any prehistoric 'attitudes'. Distaste for, or even fear of, the sea can at least be documented as a common theme in medieval literature: prehistoric attitudes have to be deduced from imagery. Also, one cannot be sure that ideas prevalent in, say, prehistoric Scandinavia were shared in other parts of contemporary Europe.

Chapter 3, 'Technology and Social Change', will be of especial interest to maritime historians and archaeologists, as it concerns the interpretation of the pictorial evidence for ships to be found in manuscript illuminations. The author focuses on four major ship-types, the double-ended 'Viking tradition' type, the cog, the 'hulc' and the carrack. He discusses the evident 'time-lag' between the documented and dated development of new technology in shipping with its appearance in maritime iconography. He suggests that in the

'Viking-tradition' period, the time-lag was wide, but that it had narrowed by the 'cog-tradition' era, and 'virtually disappears with the arrival of the carrack'.

This reviewer has disagreements with parts of this chapter, particularly those relating to the 'hulc' and the carrack. As Flatman points out, we owe the 'hulc' type to the *c.*1295 New Shoreham seal, which makes a pun based on the double-ended, castled ship it depicts. The key feature of the illustration, and the defining characteristic of 'hulc' construction, is the fact that the vessel shown does not appear to have any endposts, the plank-runs terminating horizontally under the castles. As the author rightly states, many other so-called 'hulc' illustrations show characteristics common to other types (such as double-ended hull form). He does not quite say so, but the underlying implication seems to be that the 'hulc' may have been an artefact of the medieval artistic tradition, rather than a real ship-type. There are two problems with this. One is that 'hulks' occur in 13th-to-15th-century documents as a distinct type of vessel (could we lose the rather twee 'hulc' spelling?). The other difficulty is that images of 'hulk construction' exist in many different kinds of medieval artistic media, from coins to graffiti. This suggests something more than just a stylistic convention, despite the current lack of corroborating archaeological evidence.

The section on carracks confuses the carrack with some other types, notably the 15th-century 'carvel'. The carvel appears to have been an early North European skeleton-built ship-type (hence 'carvel construction'), developed from the Portuguese caravel, and generally of small size. Carracks were originally of Mediterranean origin, apparently developed from the Northern cog, but skeleton-built (although some later north European versions were built clinker-fashion). Most were primarily large merchantmen, with a very specific appearance, and their iconography is not 'problematic', as asserted here.

The author makes the interesting observation that all the manuscript illuminations of gun-armed ships depict carracks, and not other types. However, he then takes this as an indication that cogs could not carry guns, despite the fact that there is documentary evidence to the contrary. Flatman also suggests that 'The carrack was, arguably, the first truly specialised warship of medieval Europe, designed around the use of gunpowder artillery'. Given the mercantile origins of the type, and the existence of other kinds of ships that were primarily built for war, these claims are not justified.

As well as sailing-ship pictures, the book reproduces some of the few known post-1300 north-European illustrations of oared vessels. For some reason, the visual record from later medieval northern Europe seriously under-represents rowed craft of all kinds. This reviewer does not always agree with the interpretation of the evidence for these craft put forward in this book (particularly in relation to 'balingers'), but Flatman performs an important service by publishing some of these relatively-rare images.

Chapter 4, 'Narrative, Space and Place', looks at a range of maritime and riverine themes shown in manuscript illuminations, including shipbuilding, ports, fishing, milling, salt-making and even swimming. The images reproduced here are as stunning as those in the rest of the book, although the section on 'Life on Board Ship' does not demonstrate that the illuminations have much to contribute to our understanding of what it was like to be aboard a vessel. Flatman makes the intriguing point that the illuminations generally portrayed riverine scenes as peaceful, but often showed coastal and estuarine settings as places of conflict. This may speak volumes about the medieval attitude to the sea, where the dangers of wreck, piracy and raiding could make the coastal zone very dangerous.

Flatman does show very clearly that, in general, the study of medieval art has great potential to increase our understanding of ships and maritime activities in the period. Iconographic evidence has an especially significant role to play in the study of medieval ships. He rightly suggests that contemporary illustrations can preserve evidence that is often absent from the documentary sources or the archaeological record, such as the shapes of superstructure, sails and rigging. However, this reviewer feels that we do have to try to distance ourselves from the temptation to think about medieval representations of ships as if they are 'actual' ships. This reviewer has been prey to this temptation as much as others. It can distort our interpretation, inadvertently turning an individual artist's notion of what a ship was like into a 'definitive' illustration of a type or feature. Perhaps one way ahead would be to institute a systematic study of a large body of ship-images from a wide range of media, and then cross-reference the results with evidence from documents and archaeology. One hopes that Flatman's book will stimulate a discussion of the possibilities of iconographic research.

Medieval Ships and Shipping is one of the most attractive books on medieval maritime iconography ever produced, and is very accessible to non-specialists. However, should the publishers wish to use this as a 'strap-line', they should also note that the work could have done with more careful editing, to remove some typographical errors and repetitions. This is a serious piece of scholarship. Despite its sometimes problematical approach to the interpretation of ship iconography, it deserves to be bought by anyone interested in medieval maritime history, archaeology or art (the price, at £30, is also very reasonable for an all-colour publication). The work has much to say about how medieval artists represented life on rivers and at sea, and is one of the few books published in recent years to look in detail at the iconography of medieval ships. One hopes that the author will continue his work in this field, and that the book will both stimulate debate and inspire others to get involved.

IAN FRIEL
Chichester, England

The Art, Science and Technology of Medieval Travel

(*AVISTA Studies in the History of Medieval Technology, Science and Art* 6)

ROBERT BORK and ANDREA KANN (eds)

240 pages, 23 b&w illustrations

Ashgate, Wey Court East, Union Road, Farnham, Surrey, GU9 7PT, UK, 2008, £55.00 (hbk), ISBN 978–0754663072

The Art, Science and Technology of Medieval Travel is as much concerned with innovation in the *use* of technology as innovation in the *design* of technology. As Bork and Kann emphasise in their introduction: 'taken together, the essays in this book demonstrate both the significant constraints on medieval travel, and the importance of travel in catalyzing fruitful medieval developments in artistic, scientific and technical fields' (p.13). As such this is a consistently useful book that provides much food for thought, maritime-focused and otherwise, drawing together numerous sources and themes. The book comprises four sections: Part I: 'Medieval Vehicles and Logistics' (chs 1–4), Part II: 'Medieval Travel and the Arts' (chs 5–7), Part III: 'Medieval Maps and their Uses' (chs 8–11) and Part IV: 'Medieval Navigational Instruments' (chs 12–13). Effectively these four sections combine two smaller books, Parts I and IV being a slimmer work on the practical development and use of medieval technology which will appeal more to archaeological readers, and Parts II and III being a longer and more philosophical work which will interest specialists in medieval thought, theology and technology. But it is good to see these two perspectives considered alongside one another here. Indeed, the value of the book lies not so much in its explicit discussion of 'facts and figures' but in rumination on more complex, subtle issues of medieval perception—a combination of the practical and philosophical aligned with the medieval mindset.

I will confine myself to the material of most interest to journal readers. The outstanding chapter of not only Part I but the entire book comes from the ever-reliable John Dotson. His 'Everything is a Compromise: Mediterranean Ship Design, Thirteenth to Sixteenth Centuries' is a master-class in essay writing that every student of ship technology should read. Dotson begins with the issue of speed versus capacity, making the wonderful suggestion (which he attributes to John Coates) that a fibreglass replica of an Athenian trireme ought to be built in order to test the claim that this could potentially be the fastest rowed vessel ever built. Dotson is not simply engaging in whimsy here, however: 'this kind of thinking can be historically useful … because it focuses our attention on those things that may be changed, as well as those that could not, in the historical context, and helps us to understand the impact of design and technological change' (p.31). Dotson moves on to consider first the role of galleys as warships in the Middle Ages; then the 'revolution' in galley design from about 1290; the rise in the 14th century of the 'fully fledged' cargo galley for trade in northern European waters where they had not been used before; and, finally, the impact on naval design of the introduction of artillery mounted on board galleys.

Part I includes several other chapters of interest. Chapter 3, for instance, by Julian Munby, entitled 'From Carriage to Coach: What Happened?' makes a significant point: that research into the few surviving examples of early medieval *road* vehicles has been extremely limited in comparison to the study of medieval ships, and that in marked contrast to the great innovations at sea the only significant innovation in road transport technology during this period was in the springing of carriages, with virtually no other changes. Similarly, ch. 4, by David Kennett on 'Transport of Brick and other Building Materials in the Middle Ages' makes a most welcome comparison of transport by land and water of brick and other building materials.

The three chapters of Part II, although of interest to medieval scholars in general, are not of direct relevance, as they have no explicitly maritime material. These consider in detail different architectural and art-historical evidence for medieval perceptions of pilgrimage. Part III addresses the perception of travel rather than evidence of and the technology for travel itself. To quote from ch. 8: 'a knowledge of the relationship [of the world as a microcosm of the universe] must have provided people with an appreciation of being an integral part of the universe, whether travelling to the Holy Land or to Hereford, or sitting under a tree, a perception of interconnectedness with the global that can only be envied today' (p.126). Chapter 10 by Nick Millea on the Gough Map, the oldest surviving road map of Britain, dating from c.1360 and now in the Bodleian Library, Oxford. This is a particularly timely reassessment of its origins, functions, and above all accuracy, especially the discussion of possible sources. The data for the coast of south-east England in particular may have come from portolan charts. The chapter also outlines the results of recent geo-rectification of the map using GIS, linked to a new online resource (see http://www.qub.ac.uk/urban_mapping/gough_map/). This new research has indicated that the most accurate portions of the map lie in an arc north-west of London, from Oxford to Cambridge, suggesting that the map's creators were most familiar with this region of England.

Part IV is, with Part I, of most interest. Chapter 12 by Richard Paselk on 'Medieval Tools of Navigation' offers a useful review for students: this reviewer cannot think of a comparable article that does the job of explaining these different technologies so clearly and succinctly, setting out chronologically the development

and use of the compass; then of instruments to measure altitude, including the quadrant, the astrolabe, the *kamal*/tablet (a celestial navigation device of Arab origin useful for measuring Polaris in equatorial latitudes that was not common in Europe) and the cross-staff. Included on p.182 (fig. 12.1) is an excellent photograph of the author's set of replica medieval navigation tools: it would be wonderful to have a commentary of his experiences constructing and then testing these tools. Chapter 13 by Sara Schechner on 'Astrolabes and Medieval Travel' concludes the book with a fantastic quotation from Geoffrey Chaucer, who sent his ten-year-old son off to Oxford University with an astrolabe and a handwritten instruction manual. The chapter begins with an explanatory guide to planispheric astrolabes as commonly used in the 14th and 15th centuries, including a useful photographic diagram of a surviving astrolabe of 1400 with an explanatory text. The chapter then moves on to discuss the main users of astrolabes; the diffusion of the technology into the broader community; the use of astrolabes in the hands of travellers; and, finally, the use of astrolabes at sea.

JOE FLATMAN
Institute of Archaeology, University College London

Khubilai Khan's Lost Fleet: history's greatest naval disaster

JAMES DELGADO

xi + 235 pp.,

Bodley Head, Random House, 20 Vauxhall Bridge Road, London SW1V 2SA, 2009, £15.99 (hbk), ISBN 978–1547920775

James Delgado has produced an interesting history of the two invasions of Japan by Kublaï Khan (1215–1294), together with a brief account of the subsequent Mongol naval engagements in Vietnam, Champa and Siivijaya. With this comes a small section on the maritime archaeology that has been under way for nearly 30 years which is not widely known about in the West, except for a *National Geographic Magazine* article in 1982, some documentaries, and the odd popular article. It is a popular book, written in a journalistic first person. Its focus, aside from the history, is on the attempts by maritime archaeologists, starting with Torao Mozai in the 1980s, to find the remains of the fleets which were destroyed in and around the island of Takashima in Kyūshū. I found the book engaging, particularly because it reminded me of a visit I made to Japan in 1982 to work with Mozai.

For those unfamiliar with the story, the Mongols, under Kublaï, invaded Kyūshū in Western Japan on two occasions. In the first invasion, in 1274, there was a military encounter, but for some unknown reason the Mongols withdrew. It is thought that a storm was the reason for the sudden departure, but like many of the issues in this history, it depends on who is doing the talking. At that time Japan had been at relative peace for over 50 years; there was little military expertise available to counter the invasion, and Japan had a lucky escape. *Bushidō* ('Way of the Warrior') was the moral code that governed the samurai; it stressed loyalty, frugality and honour unto death. This code had been developed in Yoritomo's time (1147–99) and the chief source of knowledge of this is the *Azuma Kagami* (*Mirror of the East*, 1266). Warfare at that time only allowed *gokenin* and high ranking samurai (the term samurai being a rank rather than a general term for a warrior), to fight opponents of equal rank in formalized single combat, firstly declaring their name and prowess and then the names and exploits of their ancestors—an aspect that would be lost on the Mongols, who instead of sending a single warrior to do battle, simply enveloped them in their close formation where they were quickly killed. The Mongols fought in closed formations, were seasoned warriors and had superior weapons: their composite bow far outranged the Japanese longbow, and the invaders were equipped with a variety of explosives and pyrotechnic devices, together with *ballistae* or *trebuchets* (possibly an early type of cannon). The Japanese only had the advantage at close quarters where the shorter Mongol swords were no match for the samurai swords. All of these things were not lost on the Japanese, who realised that Kublaï would return and their tactics would have to change if they were not to be defeated.

During the second invasion of 1281, Kublaï assembled a much larger force consisting of a combined fleet of Southern Chinese and Korean vessels. The Japanese were now better prepared. They had built a defensive wall (unheard of previously and showing that they were prepared to develop their tactics); the Mongols landed but were driven back to their boats. There was a stand-off, with the Japanese developing techniques such as harrying the fleet in small boats. Many of the details can be seen in the fascinating scroll *Mōko Shūrai Ekotoba*, see http://www.bowdoin.edu/mongol-scrolls/, commissioned by the samurai Takezaki Suenaga to record his deeds in the two battles and to justify receiving a reward from the *Bakufu*. The scroll is full of information about the Japanese and Mongol armies and their vessels. There followed a typhoon which largely destroyed the fleet and saved Japan (4400 ships and 100,000 soldiers were said to have been lost in this invasion).

In later times the typhoon was named the *kamakazi* ('divine wind') and gave birth to the legend that was invoked by the Japanese military during the Second World War for the suicide-pilots, in an attempt to turn back the Allied invasion of Japan. Delgado goes into all this. One cannot but be fascinated by the conflicting and complex nature of Japan and its society. To some extent Japan shares a similar history to Britain: they are both island nations on the edge of a large continent;

they both had similar feudal histories, and one cannot miss the similarity of the Japanese *rōnin* to the early wandering medieval knights, or the samurai to the knights attached to, and owing their allegiance to, their lord. The Wars of the Roses have echoes in the Genpei War between the Minamoto and Taira clans ending in the establishment of the Kamakura Shogunate in the late-12th century. Delgado uses the parallel between the Armada and the Mongol invasion: it was storms which dispersed the ships and saved the countries, although in both cases it is more complex than just the storms.

Japan, like most of the Eastern countries, is not easy for a Westerner to understand. Language is an obvious barrier, but the 'connections' are a far more deep-rooted and complex issue than the Western business societies and 'old boys' networks'. One is always perplexed as to why the Japanese chose to use the *kamakazi* on the allied fleets, throwing away both planes and pilots, the latter not easily replaced. Nor does one fully understand the atrocities that occurred in Southeast Asia during the war. It is strange that, at times, their fanaticism and violence can be replaced with beauty, serenity and sensitivity. For example, at the time of the invasion, the Mongols first attacked the island of Tsushima, which lies between Korea and Japan; Tsushimano-Kotaro, the son of the warlord of the island, was dispatched, against his wishes—as he wanted to fight at his father's side, to warn the Dazaifu on Kyūshū that the invasion had started. Tsushima fell and his family were massacred. Kotaro later fought and died in the battle on Takashima. His wish before the battle was that if he should die, he should be buried in sight of his home island of Tsushima. Today, on the island of Takashima, where he fell, his grave is maintained on a headland, with a clearing kept in front of the grave so that it looks out over the sea towards Tsushima. Another instance is in Hirado, the site of the grave of the Englishman William Adams, known to the Japanese as Anjin-sama, who became the chief advisor to the Shogun Tokugawa Ieyasu at the beginning of the 17th century. Adams was so highly respected that, when he died, he was buried in a Japanese-style grave. In 1982 I visited the grave and noted that small change had been left on it; when I asked Mozai what the money was for he said: 'people leave the money for the upkeep of the grave and gardens, because Anjin-sama was widely respected by the Shogun'.

How does all this relate to maritime archaeology? Not a lot really, is all I can say. It is rather extraordinary, given the account of the enormous losses of ships, that so little has been discovered. Curiously, the Japanese do not seem to be particularly interested in maritime archaeology, and the archaeological work has been sporadic. Delgado notes this, adding 'not too long ago, a visiting UNESCO official was informed by her Japanese hosts that there was *no* underwater cultural heritage in Japan'. It is unfortunate that Delgado does not go into what archaeology has been done to date, and what has actually been found. Many of the archaeological conclusions we are told about are drawn from 502 fragments of wood. I think it is a bit premature to conclude that the Mongol ships were shoddily built, or the invasion badly planned, from such limited information. There are discussions about a mast-step, said to have been poorly constructed, but there is no drawing or photograph. If the mast-step is the one illustrated on the Nautical Archaeology Program web-site: http://nautarch.tamu.edu/shiplab/randall/Upgrade2005/Notsodivinewind.htm, I wonder if it is a mast-step at all. There is talk about poor workmanship and associating this with the rush to the invasion, again a bit questionable, and that story was certainly around in the 1980s. Delgado refers to maritime archaeologist Randal Sasaki, a Texas A&M University Nautical Archaeology Program research associate. Unfortunately, although he is much quoted, there are only two references to his work (both to the *INA Quarterly*) and a web-site.

I have a few minor criticisms: Delgado goes to great lengths to include the diacriticals for Vietnamese words, but omits them for many Japanese words; Kublaï is spelt Khubilai and Chinese words are not in *pinyin*. The 16 pages of photographs are not particularly interesting, with only three pages of archaeological interest. It is regrettable that the book does not bring one more up-to-date. Still, it is not meant to be an archaeological report, and one hopes that such a report will soon be forthcoming. It is a good read for £16, and one hopes it will encourage further work to be done, although I detect a hint of pessimism. Unfortunately, Japan has suffered for a long time with a deep economic recession. As Delgado says: ' "The Holy Grail" is what is needed now, think some, to revive the interest in the quest'. Let us hope that, with INA's support, this can be realised.

JEREMY GREEN
Western Australian Museum, Fremantle

Mary Rose Your Noblest Shippe: anatomy of a Tudor warship

(*Archaeology of the Mary Rose* 2)

PETER MARSDEN (ed.), with 12 Contributors

xxv + 433 pp., 285 b&w illustrations, 15 separate A2 sheets of plans in slipcase

The Mary Rose Trust, Portsmouth, England, via Oxbow Books, 10 Hythe Bridge St, Oxford OX1 2EW, UK, £45 (hbk), 2009, ISBN 978–0954402921

Mary Rose occupies a special place in the history of modern maritime archaeology, as the last and most sophisticated of the great, large-scale pioneering projects that created the field as we know it today, combining high-quality field data, new techniques for accurate three-dimensional mapping, and archaeo-

logical control over the lifting. After the recovery, and despite often severe financial limitations, the Mary Rose Trust documented much of the find material to a very high standard and became a leader in conservation research. Most recently, funding has been secured for a new, state-of-the-art museum to exhibit the ship and finds, and the Trust has nearly completed the publication of a series of five scientific monographs. This volume is the next-to-last to appear and covers the ship, its fittings and operation.

The Trust established as the premise for the series, as is noted explicitly in each volume, that the monographs are not a final analysis but interim reports. The commission to the authors and editors stated that no new research was to be undertaken, although in many cases this injunction was skirted or even blatantly ignored—for which we should be thankful. In the case of the hull study, it would have been impossible to publish the ship on the basis of the information in hand and so further documentation was undertaken, including digital scanning of the hull. The priorities of the Trust in the first 25 years since the raising have been the monumental undertaking of conserving hundreds of tons of waterlogged wood and building a museum, which is as it should be, but the need to conserve the ship has imposed limitations on the documentation of the remains. It is thus unreasonable to expect this publication to be a comprehensive presentation of the ship in all its details, and many questions cannot be investigated until the conservation programme is completed and the ship is more accessible. On the other hand, we should expect that an interim report on a find of this importance would be produced with the care and craftsmanship that the ship deserves.

The volume is presented as a book with 15 folded A2 sheets of full-colour plans in a slipcase. The main text is divided into 22 chapters, with two appendices, glossary, index and bibliography. Chapter 1, by David Loades, provides a brief historical background to the development of warships up to the Tudor period, based largely on older sources, and a review of the historical evidence for the construction and rebuilding of the ship. Chapter 2, by Peter Marsden, is a précis of the history of the *Mary Rose* project. Chapter 3, also by Marsden, presents an explanation of the assumptions and methodology behind the author's reconstruction of the missing part of the ship. The principle advocated is that the ship is symmetrical about the vertical centre plane, so that the missing port side can be mirrored from the surviving starboard side, once the twist and bend have been taken out of the ship and the location of the plane of symmetry established. That ships are generally symmetrical is hardly in doubt, but the method advocated here is one of rigid and perfect symmetry, which does not exist in real wooden ships. Marsden cites *Vasa* as evidence of the rule of symmetry in ships, but that vessel is not symmetrical in form, construction or internal arrangement. In several places the slavish insistence on symmetry creates unnecessary problems for the reconstruction. Chapter 4, by Richard Barker, Brad Loewen and Christopher Dobbs, presents a detailed analysis of the design principles behind the form of the hull, and the relationship this has to the framing system and wood selection. What would have been a good introduction to this chapter by Barker appears as Appendix 1. Chapter 5, by Damian Goodburn, looks at the use of forest resources and tool techniques shown by the wooden remains of the hull. The first part is an excellent study of several kinds of evidence for forest management, wood selection and resource suitability, but the latter part, on tools, is more cursory, which is a disappointment given the author's extensive knowledge of tool techniques.

The core descriptive text follows, with chapters by Douglas McElvogue on the hull (exclusive of decks), steering, mooring, anchoring, boats and pumps, and by Marsden on the structure of the hold, the different decks and the sterncastle. Dobbs has a short chapter on the distribution of the ballast, and a longer study of the galley and its reconstruction. The descriptive treatment of the hull ends with a chapter by Marsden and Richard Endsor on propulsion. These chapters vary quite a bit in quality and usefulness. Marsden's presentation of the hold and decks is of a good standard, with thorough and consistent description of the deck structures, partitioning and other features, all the more remarkable when one considers that much of the material has not yet been recorded in detail. Dobbs's galley study is well considered and comprehensive—in many ways it is the most complete study in the volume. McElvogue's hull chapter is hampered by lack of access to the structures he describes, especially the framing, and by too many poorly-considered assumptions presented as conclusions. Detail is high at the beginning, with dimensions and full descriptions, but runs out of steam about half-way through. Barker and Loewen provide a much more detailed and believable presentation of the framing system in ch. 4.

Chapter 14, on the ship's rig, is the most disappointing, since the majority of the material is conserved, readily accessible, and has been documented in detail, but is not presented. Marsden writes on the mast locations, which are conjectural except for the mainmast, a spare top and the sails. A folded sail was recovered, but has not yet been conserved, while other sail fragments which have been conserved are not discussed. Endsor's section on the rigging, after a brief description of the typical rig of the period, is followed by a few representative examples of rigging finds, such as a parrel, several blocks, and a couple of deadeyes. Almost no provenance or contextual information is provided for these finds, and after the first two blocks, the descriptions are cursory. In addition, rigging fittings on the hull, such as a knight with sheave described in the chapter on the sterncastle, are not mentioned.

Two chapters follow which are summaries or interpretations of material published in other volumes.

Chapter 17, by Alexzandra Hildred, appears to be a summary of the armaments volume (still awaited), and, while the section on the construction and alteration of the gundecks is excellent, the gunport-by-gunport catalogue of finds and guns is probably not relevant to this volume. Chapter 18, by Robert D. Hicks, presents the navigational equipment which was published more fully in Volume 4, *Before the Mast* (reviewed in *IJNA* 35.2, 341–3), with an analysis of the relationship between weather, piloting and tactics.

The last three chapters are analyses of various sorts. A short text on the dendrochronological investigation of the ship, by Dobbs and Martin Bridge, provides a good summary of the sampling strategy and results, including the most credible interpretation of what parts of the ship are original construction and what are later alterations or repairs. Chapter 20 (Marsden) is a summary of the conclusions reached in earlier chapters, with some notes on the use of the ship. Chapter 21 (Marsden) is a short analysis of the reasons for the sinking, with the conclusion that the key factors are the low height of the new gunports above the water, and the difficulty of communication between the gun-crews on the main deck and the men on the deck above, who controlled the lines for opening and closing the port-lids. According to Marsden, their slow response time, possibly due to being foreigners, doomed the ship. He seems to believe that if the ports had been closed quickly, the ship could have been saved, but he has forgotten that the guns would have to be hauled in first! The final chapter summarises the work still to be done. In addition to Barker's aforementioned essay, the appendices include the biological analysis of caulking remains, by Allan Hall and Penelope Walton Rogers. This is new material, showing the use of both animal hair and vegetable material, mostly flax, in the seams.

As an interim report, the content is more or less what one could reasonably expect, with the exception of the hull and rigging chapters, and there are some very good studies of specific features that will be useful to ship-specialists and others. One item very notable by its absence is a real lines-drawing. Six sections and five waterlines are presented on separate pages, but no coherent indication of the overall shape of the hull. Even a preliminary lines-plan would have been useful, and would have allowed the calculation of an approximate displacement, which would have made more sense of the figures provided for the weights of ballast and armament. The reconstructions suffer from the simplistic insistence on an unrealistic level of symmetry, and there remain inconsistencies between different views in the plans. Probably because the major rebuild in the 1530s was instrumental in creating the appearance of the ship as it is today, virtually every type of discontinuity found in the hull is interpreted as a result of alteration. For example, the use of two different wood species in the keel (oak and elm) is accepted as a repair, without confirming evidence, when it is entirely possible that the keel was originally made so. The dendro-dates for the large quarter-knees between the side and transom show that they are not original construction, but this is hardly evidence that the entire transom is a later addition or that the ship originally had a round stern, as Marsden proposes.

The authors have made great efforts to get the most out of their material, but are poorly served by the editors. Little editorial control seems to have been exercised over the organisation of the material, the production of the text and illustrations, or the shaping of the final text into a single, coherent work. The relevant information on specific hull-features, such as the framing or sterncastle, is spread over several chapters rather than consolidated in a single place. Different authors repeat the same information, although not in a consistent manner, and the different chapters are not harmonised in style or format, nor do they always agree on dimensions and description. For example, Goodburn and McElvogue discuss the sectional shape of the keel amidships, but provide two different descriptions, neither one of which agrees with the illustration provided. The editor addresses this in the preface, noting that there are many different interpretations possible and he felt it was best to let each author have his own, but the result is not reader-friendly.

The illustrations are poorly chosen in many cases, poorly sized or reproduced in others. Almost all of the photographs appear to be black-and-white conversions of colour originals, without correction for the loss of contrast and clarity that this causes. Many illustrations are too small or fuzzy to be useful. For example, the only drawing of the framing system as a whole (Fig. 4.1), certainly one of the most important illustrations in the book, is so small and poorly printed that it is effectively useless. All of the deck-plans in the book are published with the bow at the bottom of the page and the labels upside-down. In the sheets of plans, which are all supposed to be at scale 1:100, the reconstructed plan of the main deck-beams (sheet F8) is at a substantially smaller scale, but no graphic scale is provided.

Proof-reading is inconsistent; some chapters are very clean, while others average several grammatical errors and typos per page. The title of the volume on the cover does not agree with the title of the volume on the sheets of plans, and the plan-sheet titles do not agree with the titles on the drawings themselves. Dimensions are not cited in a consistent format, and the form for identifying and defining technical terms (which do not follow any standard nautical dictionary) varies widely.

There is much of interest in this volume, even if it cannot be comprehensive and will raise as many questions as it answers, but the poor editing and proof-reading will not make it easy for the reader to appreciate it. One has to hope that once the ship has emerged from conservation, resources will be concentrated on a thorough documentation and analysis of the hull.

FRED HOCKER
Vasa Museum, Stockholm

Pepys's Navy: ships, men and warfare 1649–1689

J. D. DAVIES

304 pp., large format, heavily illustrated, 12 colour plates

Seaforth Publishing, 47 Church St, Barnsley, South Yorkshire S70 2AS, UK, 2008, £40 (hbk), ISBN 978–1846320147

This is a work of the first importance. It is hard to reflect the quality and variety of this magnificent book, a work of 55 chapters spread across 13 sections, richly and generously illustrated with some excellent colour reproductions. It provides a superb guide for anyone who needs to understand the English navy of the 17th century, from the administrative system, the design of ships and the recruitment of personnel, to the development of the dockyards, battle-tactics and national strategy. David Davies, the leading authority on the Restoration navy, has brought together the fruits of research by a number of eminent scholars to provide a comprehensive overview of a critical epoch in national history. In contrast to the works on which the book is modelled—Brian Lavery's *Nelson's Navy* and *Churchill's Navy*—Davies offers a less 'heroic' point of entry to the era, but one of equal importance.

Samuel Pepys, whose generous features and flowing pen have come to dominate our understanding of the Restoration navy, began his career in the Royal Navy clearing up behind one of the spaniels which accompanied Charles II home in 1660. After three decades of service in naval administration, Pepys retired shortly after James II, the last Stuart king, went into exile. While he did not build, own, or command the navy, his administrative skill and sustained management did much to translate the royal will, and significant amounts of money, into ships of war, men and food.

The naval administration in which Pepys served was tiny: in 1687 the support staff of the Admiralty comprised four clerks, a messenger and a housekeeper. Board meetings were held in Pepys's house. The larger Navy Board operated in the shipping quarter, from a new Wren-designed building behind the Tower of London. The old structure had burnt down in 1673, which explains why many Navy Board records begin in that year. The Navy Treasurer operated from Broad Street in the City. Parliament had no direct role in naval policy, which was driven by the opinions and desires of two men, Charles II and his younger brother James, Duke of York, Lord High Admiral and later (1685–1688) James II. The royal brothers were the most naval monarchs ever to rule England; the service was strongly permeated by their ideas and character. Charles named warships and yachts for his mistresses, one of whom provided the model for Britannia, and he decided to name the last 1st-rate battleship of his reign after this newly-minted national symbol. Pepys's task would be to translate royal policy into reality. Typically, two decisions taken in 1677, the introduction of a commissioning examination, and the order for 30 new capital ships, were royal, but involved a great deal of hard work for Pepys.

This was the age when the English navy became a major factor in European, and to a lesser extent global, politics. The size, power and reputation of the navy gave England a place among the major powers. The Royal Society and Royal Observatory were very consciously established to support the naval/maritime needs of the Restoration state. In consequence the navy became more professional, and generated a significant body of professional literature, on shipbuilding, tactics, recruitment and much else. One reason why Pepys continues to dominate our perception of the age is that he collected much of the written material, both print and manuscript, and ensured that his library remained essentially as he left it at Magdalene College Cambridge. Pepys was especially interested in shipbuilding, collecting both models (sadly dispersed long ago) and manuscripts going back to the days of Henry VIII. His collections demonstrate that contemporary English shipbuilding practice differed from that of the main rival, the Dutch, in almost every way. The English used detailed building plans, launched their ships stern first, and emphasised strength and durability over economy and speed. Elsewhere the physical remains of this mighty fleet are less coherent. A number of high-profile wrecks provide access to the shipbuilding methods, and Davies lists those which have been excavated, and those which have only recently been found. He also deals with the built infrastructure ashore, notably dockyard buildings and forts.

The powerful second-rate flagship HMS *London*, which blew up and sank on 7 March 1665 off the buoy of the Nore, was recently located during survey work for a deeper shipping channel, and in October 2008 was designated under the Protection of Wrecks Act (1973). The magazine explosion that destroyed the ship indicated a terrifying lack of safety-consciousness afloat, being a by-product of the contemporary obsession with firing salutes on every occasion, which must also have had considerable financial implications. More significantly, among the 300 plus men lost were 21 relatives of Admiral Sir John Lawson, whose flag she had been ordered to carry. Naval recruitment and manning were still influenced by personal and local factors: seamen preferred to join ships commanded by local officers. Other members of the *London's* crew were newly-raised Scots, recruited by order of the King. After the accident Charles demanded another 500.

Service afloat was hard, and dangerous enough without carelessness: disease and shipwreck both claimed more lives than battle. That said, the battles of the Anglo-Dutch wars were horrific, with casualties greatly exceeding those of later Anglo-French engagements, because both sides were professional, determined and prepared to fight. The number of admirals

and captains killed was a clear indication that battles were fought at close range. Medical services remained primitive, but in 1694 the vast project to build a palatial seaman's almshouse complex at Greenwich was begun—a fitting tribute to the central place of the sailor in the national identity. Like the ships of the fleet, Greenwich Hospital was built to impress anyone entering London by river, the finest of Baroque buildings in Britain, erected to house 'decayed' seafarers.

The Restoration navy was built to command home waters, the North Sea and English Channel, the main enemy was the Dutch, and the main base was at Chatham. After 1688 when France became the main enemy, a new base had to be built at Plymouth, and Portsmouth became more important than Chatham. The fleet was dominated by massive line-of-battle ships, armed with the largest and heaviest guns that could be stowed, operating for relatively brief periods at sea, seeking out the enemy and hoping for a 'decisive' battle. These proved much harder to secure than had been expected: after their crushing defeat in the First Dutch War the Dutch, well aware of their inferiority in firepower, simply refused to stake all on a single combat. As long as they could preserve their fleet and live to fight another day the Dutch would not lose the war. Davies also analyses the other contemporary naval powers, from the French, Danish and Swedish battle-fleets to the cruiser navies of Spain and Portugal, the galleys of Venice and Ottoman Turkey, and the Barbary Corsairs who obliged the English fleet to operate in the Mediterranean in defence of an expanding network of trade. Among the more striking discoveries are the original meanings of the terms 'convoy' and 'cruiser'. A 'convoy' was the warship escorting merchant vessels, not the escorted formation, while a 'cruiser' was a vessel that cruised in a specific sea-area to cover trade. Both terms described a function, not a type of ship.

English ships went into battle with elaborate, costly Baroque decorative schemes that combined the symbols of Christianity and classical mythology, even on ships named for saints. The ornate majesty of the age was brilliantly captured by contemporary artists, especially the Dutch masters Willem Van de Velde father and son. After 1672 they served Charles II, and inspired a new genre of English marine painting. While elaborate carved and gilded decoration added nothing to the ships' fighting power, and much to its cost, it was essential. Appropriate decoration was used to convey the might of the state to observers, and it was essential that this be done in the same architectural style as the great new cathedral of St Paul. Major figureheads were large, and highly symbolic. That on Cromwell's flagship, the *Naseby*, had represented the Lord Protector trampling on his foes, following Charles I's *Sovereign of the Seas*, which had the Saxon Sea King Edgar doing much the same. Charles II had the *Naseby* renamed *Royal Charles*, burnt the old figurehead, and redecorated her with suitably royal devices. Some of these are on display in the Rijksmuseum, following her humiliating capture in 1667! Charles and James were heavily involved in all aspects of ship-design, from size and firepower to names and decoration, while the launch of a major warship would be a royal occasion. Charles and James saw the navy 'both as their principal weapon of war and as the most important symbol of their royal authority' (p.98). England has never been more truly naval than it was in Pepys's day.

The dominant theme of the book is the steady rise of professionalism and standardisation across all aspects of naval life—very much the work of a centralising bureaucracy. After 1660 the officer corps was rebuilt to ensure loyalty to the crown, through conformity in politics and religion. Sailors' pay was raised, and food improved. Pepys took inspiration from the French system of Colbert, much as his royal masters admired the methods and majesty of their cousin Louis XIV's kingship, yet the flexibility of the English state and naval system proved their salvation. Integral to this development was the emergence of a simple sense of patriotism among seafarers, increasingly anti-French and anti-Catholic, which ensured that few were prepared to fight for James II in 1688. His heroic status as a successful warrior-admiral could not counteract deep-rooted fears that Catholicism would be re-imposed by royal *diktat*.

James II had fled to France in 1688, and Pepys resigned soon after, but the navy carried on. The decisive defeat of the French fleet in 1692 ended any lingering hopes James may have harboured of an early return to London. By an irony of fate the Restoration navy destroyed the Stuart monarchy. After 1688 the navy became the tool of a constitutional monarchy, one led by a Dutch soldier and a parliament dominated by landed money and city merchants. No longer the King's fleet, it had become the English navy. To fight France, a new enemy, it would need new bases, larger and more-seaworthy ships, and far more cruisers to protect merchant shipping. In 1694 Parliament used its new-found power to pass the Convoys and Cruisers Act, which obliged the navy to devote a substantial proportion of its resources to the defence of trade.

This is a brilliant study of the Baroque navy of Charles and James Stuart, the last kings to own the fleet, by the world's leading authority. The design, reproduction and layout of the book are exemplary, as one would expect from the experienced publication team of Robert Gardiner and Julian Mannering, lately of Chatham Publishing. The ambition and execution of the work reflect a lengthy immersion in the subject, informed by a mastery of archives, art and artefacts, while the study is enlivened by constant interjections in the inimitably words of Mr Pepys. He may not have owned or commanded this navy, but his words will ensure that it lives for ever.

ANDREW LAMBERT
War Studies, King's College London

The Spanish Convoy of 1750: heaven's hammer and international diplomacy

JAMES A. LEWIS

157 + xxi pp., 2 maps, 1 table

University Press of Florida, 15 NW 15th Street, Gainesville, FL 32603, USA, 2009, $65.00 (hbk), ISBN 978–0813033587

James Lewis's work on the fate of the Spanish Convoy of 1750 is the latest in the University Press of Florida's burgeoning 'New Perspectives on Maritime History and Nautical Archaeology' series, which now runs to some 31 books. The stated aim of the series editors, which is to bring important books on maritime history and nautical archaeology subjects to general readers and specialists alike, is a laudable one. This book certainly has the ingredients to fulfil that objective: huge colonial fortunes threatened with disaster; sailing ships buffeted by wind and rain, and at the mercy of the elements; and, not least, the whiff of buried treasure and the question of what to do with it. To a large degree, it succeeds in combining these raw materials to produce an interesting tale of risk and ruin in the 18th-century Atlantic Ocean.

The book sets out to tell the story of a Spanish *flota* (convoy), which left the Caribbean in August 1750. The seven ships had gathered at San Christobal de la Habana, the so-called 'Key to the New World', in order to take advantage of Spanish naval protection for the voyage back to Europe. Some of the ships were loaded with a bumper crop of Cuban tobacco belonging to the Company of Havana—one of Spain's most lucrative public monopolies—and destined for the markets of Cadiz and Seville. Others were transporting mahogany for use in renovations of the Royal Palace in Madrid. With such a richly-laden fleet about to run the gauntlet of the open seas, it is little wonder that the captains decided to avail themselves of a naval escort. The warship in question, *La Galga*, was detailed to return to Spain for a refit. Under the command of Captain Daniel Huomi, an Hiberno-Spanish officer, the ship was a *navio* (warship) with the capacity to mount over 50 guns.

Only a few days out of harbour, the convoy encountered one of the powerful hurricanes that lash the Caribbean at this time of year, which swept the ships up the coast of British North America. Although the slightly-delayed departure of the convoy coincided with peak hurricane season in the region, Lewis argues that this consideration does not seem to have had much effect on departure dates for fleets leaving Havana. The risk of sailing into meteorological disaster seems to have weighed less on the minds of merchants and investors than the risk of losing profit. The cost of maintaining a ship and crew, as well as the hazard of holding on to a valuable cargo, were much more important factors. In this case, however, it would have been better to stay put. Among the ships wrecked was *La Galga* itself. The rest of the book deals with the reception that the (large number) of survivors received from the British colonists on mainland North America, and the legal question of ownership of the sunken cargo.

The initial idea for writing this book came about when the author was approached by an underwater diving company searching for remains of the convoy. This illustrates the powerful hold that a story such as this about shipwrecks and sunken 'treasure' (and the possibility of its recovery) still holds on the human imagination. However, there is also a serious point here about the legal basis for activity such as underwater recovery: who owns what, and what right do they have to recover it? The 1750 convoy has been the subject of a number of contemporary court cases involving the governments of the United States, Spain and the State of Virginia.

By piecing together financial and shipping records, as well as other documentary evidence, Lewis has succeeded in presenting a reasonably detailed case study of what happens when the elements combine to wreak havoc on human endeavours. With a text of just over 100 pages long, there were some aspects of the story that the book could, perhaps, have explored in more detail. For example, the documentary data illustrating the importance of women as merchants and investors in the Atlantic economy at this time might have been elaborated on. The reaction of the British colonists to the misfortune of their erstwhile (and future) Spanish enemies also deserved more attention. While there is some interesting material on the relations and negotiations that took place, there was room for more. Overall, however, the book offers a compelling snapshot of 18th-century maritime history in the Atlantic world with a very pertinent contemporary relevance. In this regard, it provides a useful case-study and perhaps signals interesting ways in which such meshing of the historical and the contemporary may be achieved in future.

JOHN McALEER
National Maritime Museum, London

HMS *Fowey*: Lost and Found: being the discovery, excavation, and identification of a British man-of-war lost off the Cape of Florida in 1748

RUSSELL K. SKOWRONEK and GEORGE F. FISCHER

233 pp., 3 b&w illustrations

University Press of Florida, 15 NW 15th Street, Gainesville, FL 32603, USA, 2009, $45 (hbk), ISBN 978–0813033204

There are many books dealing with the excavation of wrecks, describing the search for their identity, and

the objects found on the site. Yet all of this takes place against a background of rules which may be more or less complex depending on where wrecks lie. These rules have evolved over many years in response to a perceived need to preserve these remains of the past. However, little has been written on the development of policy and how this has been influenced by events which may have little to do with wrecks. *HMS* Fowey: *Lost and Found* is one book which does lead the reader through the twists and turns that marked the search for a particular wreck, and how this influenced the development of law and management of wreck-sites in Florida and, more broadly, the United States of America. An interesting aspect of the book is that the authors give brief sketches of the personages involved in what happened, including the judges in the various court proceedings. One of these was impeached for corruption and perjury, removed from office and then elected a member of the US House of Representatives!

HMS *Fowey* had been commanded by William Drake, a descendant of Thomas Drake, brother of Sir Francis Drake, one of the most famous seafarers in British history. Early on the morning of 27 June 1748 she had struck a reef off the north coast of Cuba. Desperate efforts to free the vessel failed as, although it did manage to float off, too much damage had been done to keep the water out. Drake ordered it scuttled. At his court martial, a strong westward current was given as the reason for the stranding. The precise location of the wreck was lost.

In 1978 a Florida businessman, George Klein, discovered a wreck some 12 miles south of Miami. He and some friends removed artefacts from the site. The next year he commenced proceedings in the US District Court, SD Florida, asking for a declaration of ownership or a liberal salvage award. However, the wreck lay within the Biscayne National Monument—an area set aside by the Federal Government under the Antiquities Act 1906. In 1968 the Biscayne National Monument had come under the authority of the National Park Service. The authors recall the negotiations that took place within the federal and state administrations as to how the matter of the wreck should be handled. Would it become a test-case for the federal legislation such as it then was? In 1980 the court ordered Klein to hand over all the artefacts he had removed and ordered the government to locate and protect the wreck. Unfortunately, the Park Service did not know where the wreck was.

Klein provided a latitude and longitude, stating that the wreck was within some 3000 yards of this. But that covered an area of 9.2 square miles. Rangers from the Park conducted a search but found nothing. The Southeast Archaeological Centre was asked to do the work. They first proposed using the Army Corps of Engineers but were told to keep the survey within the Park Service on security grounds. Eventually a team composed of people from the Park Service, Florida State University and the Submerged Cultural Resources Unit were gathered for the task. After eight days of searching in 1980, the site was found. It was photographed and a videotape made. Twenty-one items were raised to assist in identification. A draft report was prepared but never finalized. The site was visited some months later to clarify certain points against Klein's account, and to examine a large mass of concretion.

Identification was not easy. Both Spanish and English ships were known to have sunk in the area. A retired expert—Mendel Peterson—was asked to advise and, on the basis of the material raised, declared the wreck to be Spanish. Others were divided on its origin. In May/June 1983 further work was done on the site. This required a modification of the restraining order that the District Court had placed on the site. A grid was laid over the site and photographs taken before objects were mapped and the most important raised. Backfilling was done and a layer of sand spread to protect the site. Sea-grass was transplanted from shallower areas and pinned with steel nails. This died, leaving 1200 nails to contaminate the area. However, there were people who saw the archaeologists as keeping the site for themselves; as raising material for their own benefit. Near the end of the work, someone dragged an anchor backwards and forwards across the site.

> Planks were torn up, and the rope grid floated in a tangled, broken mass. Persons unknown had made certain that if they could not have the wreck no one could. They had really shown the eggheads (p.105).

In August 1983 the District Court decided that the vessel was the property of the United States and Klein was the not entitled to a salvage award. A precondition for such an award is the rescue of the property in question from 'peril of the sea'. The court found that 'the plaintiff's unauthorized disturbance of one of the oldest shipwrecks in the Park and his unscientific removal of the artefacts did more to create a marine peril than to prevent one' (*Klein v. Unidentified, Wrecked and Abandoned Sailing Vessel* 568 F. Supp. 1563 (1983)). This conclusion was upheld by the Court of Appeal in 1985. As the authors note this was a landmark decision in the history of litigation concerning wrecks in the United States.

Chapter 8 discusses various aspects of the structure of the ship as revealed by the work done on the site. All of this was inconclusive. Compounding the problem of identification was the fact that there were British vessels purchased by the Spanish in the 1733 plate fleet that had been lost in this general part of Florida. Chapter 9 then goes through analyses done on the artefacts that had been found. This examines the weapons and personal objects found in the areas occupied by the crew and officers. The overall con-

clusion based on the historic, archaeological and circumstantial evidence was that the wreck was that of the *Fowey*.

The final chapter deals with the administrative twists and turns that affected the remains of the *Fowey* after its identification. Total excavation was ruled out for reasons of cost and following the principle, now endorsed as the first option in the UNESCO *Convention on the Protection of the Underwater Cultural Heritage* 2001, of preservation *in situ*. Tensions emerged between the Park administration and certain members of the Southeast Archaeological Centre who had been deeply involved in work on the wreck-site. The authors allege that the chief of the Centre was not supportive of underwater archaeological research. In the late 1980s, against the advice of those who had worked the site, the artefacts raised from the wreck were displayed in a building on Adams Key. This was low-lying and totally destroyed by Hurricane Andrew in 1992.

In late 1984 'involvement with things related to *Fowey* terminated at SEAC, and interest in the site almost totally disappeared' (p.177). Work was done on the site by Park officials in 1993 but no report published. According to the book, the work included the excavation of a large pit into which many loose items from the site were dumped and then covered with sand. Following further problems with methods of protection, in 2000 the Park Service said they were unable to protect the site from erosion and looting and suggested it be removed or excavated.

In all of this, the British Government had not been officially consulted. When the wreck was first found there was little knowledge about sovereign rights among the administrators involved. After all, Spain had made no claim regarding the many wrecks that had been excavated off Florida. However, by 2000 both Spain and France had successfully made such claims. The issue had been debated at length in UNESCO during the preparation of the 2001 Convention. With this as background, a Major Trelewicz, who was researching the *Fowey*, contacted British authorities who wrote: 'we believe that the wreck, lying as it does within the protective boundaries of the Biscayne National Park, has been responsibly protected and preserved by the United States authorities. ... we would expect to be consulted about any proposals for further recoveries from the wreck of HMS *Fowey* or major preservation works thereon' (p.183).

There the book ends. There is now a web of legislation and rules in the United States for the preservation of wrecks. Local authorities are now on notice that the site is of direct interest to the United Kingdom. The State Department will be involved and any activities on the site will have an international dimension.

PATRICK J. O'KEEFE
University of Queensland, Australia

Voyages: documents in American maritime history

JOSHUA M. SMITH (ed.) in co-operation with the National Maritime Historical Society

Vol. 1, 416 pp., 6 b&w illustrations; vol. II, 448 pp., 15 b&w illustrations

University Press of Florida, 15 NW 15th St, Gainesville, FL 32611–2079, 2009, $34.95 each (hbk), ISBN 978–0813033044 (I) and 978–0813033051 (II)

Any field of history, especially one as vast as the maritime history of the United States of America, is subject to some degree of subjectivity. This subjectivity is made more pronounced when only a limited number of primary sources can be reviewed to offer a broad view of the field. For this reason, some readers will find that this book is lacking the comprehensiveness they desire. Other readers will consider that the selected sources emphasize some aspects too much to the detriment of others. In reality, only a multi-volume study could satisfy most readers. Naturally, I am not free of that perception, but beyond specific comments on some of these documents, I will focus my comments on two key points of the book: the concept of the United States of America specifically as a maritime nation, and maritime history in general. I believe that the latter concept deserved a wider development by the editors.

As is usual in the English language, 'America' is used to refer not to a continent but to a social and political process which began when some English colonies were established in the New World. Such an approach could be valid for many English-speaking people, and therefore I will not try to refute it. But the name implies some aspects which deserve further discussion. Going back to our initial training as historians, it should be remembered that history is not an ordered succession of events through time. On the contrary, if we accept that history is a permanent dialogue and questioning from the present to the past, then the editors should have adopted the present-day USA as the point of departure for its selection of sources.

If we choose a more culturally-expansive interpretation of history, we must not begin with the English colonies. Rather, testimonies of aboriginal maritime cultures in the whole territory of the present-day United States of America should be included. Amongst those that we can mention are those native groups who confronted at sea Juan Ponce de Leon during his voyage of exploration along the Florida coast in 1513; those who stopped the advance of Alonso Alvarez de Pineda in the Mississippi in 1519; those who were contacted by Spanish explorers north of Cape Mendocino towards the last quarter of the 17th century; those found by Captain Cook in Hawaii in 1778; or those who traded with the Russians along the Alaska coast since early in the 17th century.

But beyond the indigenous population we also should mention the Scandinavian (Viking) voyages, which brought the first Europeans who not only made contact with the continent, but also settled in a territory which eventually became part of the USA. There are not many primary sources from these voyages, but at least some samples from the Saga of the Greenlanders (*Flateyjarbok*) or the Saga of Eric the Red (from the *Hausbok*) make reference to their arrival and settlement in a region near the Hudson River. Such an absence contrasts with the inclusion of Christopher Columbus's letter of 1493, describing his voyage and discoveries of the previous year. The fact is, as is well known, that Columbus never reached any part of the current territory of the USA, and therefore his great achievement could hardly be assumed to be part of the maritime heritage of that nation.

The second issue which deserved a wider development in the preface is the concept of maritime history itself. In a broad sense, the maritime history of any country or region is a process which involved several participants, far more than sailors and the ships in which they navigated. Therefore, an understanding of maritime history usually requires the joint effort of several disciplines, amongst them history, archaeology, ethnology and sociology. Although the book includes a few primary sources referring to some of these disciplines, they surely deserved more development and explanation. For instance, when quoting some Mel Fisher declarations on the Spanish galleon *Nuestra Señora de Atocha*, there is a short mention of the long struggle between nautical archaeology and treasure-hunters. That is fine, but it would have been even better to mention the 2001 Unesco *Convention on the Protection of the Underwater Cultural Heritage*, as well as the position of the USA regarding their own naval ships sunk within or beyond territorial waters.

The way in which the primary sources are presented by the editors is in consonance with their perception of the USA's history. In that sense it seems to be covering many of the aspects involved in that historical process. However, as stated, I would have preferred a section devoted to aboriginal navigation. I also would include topics such as maritime education, yachting, and port cities as well as shipyards. Also of importance is the United States' position regarding the New Maritime Law, and maritime explorations in areas like the polar regions or the Amazon basin.

Still, none of my comments invalidates the great effort of the editors, not only in the selection of the documents but also in their organization. The first volume presents 80 documents from the Age of Reconnaissance to the Civil War, grouped in the sections: 'America and the Atlantic World', 'Revolution and Republic', and 'Antebellum Seafaring'. The second volume contains 78 documents, which cover from the mid-19th century to the current War on Terror, and are organized in three sections: 'Postbellum'; 'War, Depression, War Again'; and 'Cold War and Beyond'. Each section and each document is preceded by an explanation of the topic and the source itself, and the latter are followed by some questions which help to develop a more critical approach to them, as clearly stated in the preface. This methodology will provide a valuable tool for those engaged in teaching the maritime history of the United States of America, promoting a critical sense in their students, and giving them a wider perception of its maritime past. For all this, I considered this work not only valuable but also highly recommendable.

JORGE ORTIZ-SOTELO
US Naval Academy, Annapolis, Maryland

La Mer pour Mémoire: archéologie sous-marine des épaves atlantiques

MICHEL L'HOUR and ÉLISABETH VEYRAT with the co-operation of Olivia Hulot and Morgane Toulgoat

367 pp., *c*.500 illustrations (mostly colour)

Somogy Éditions d'Art (Paris) and Association Buhez for DRASSM, Fort Saint-Jean, 13235 Marseille, Cedex 02, France, 2005, £45, ISBN 2–85056–831–7.

'The Sea as a Source of History' is the suggested English title of this weighty, large-format, copiously-illustrated volume. It derives from an exhibition which toured much of the west and north of France, and so it naturally focuses on undersea discoveries in those regions, especially Brittany. Much of the volume is written by Michel L'Hour and Élisabeth Veyrat, and reflects their courageous and energetic surveys and interventions along the north-west coasts of France. There are also contributions by some 40 other authors, be they scientific specialists or the discoverers of wreck-sites. There are captions and chapter-headings in English by Graham MacLachlan, which make the book in principle accessible to an international audience, and the high-quality illustrations, many of historical sources unfamiliar outside France, enable even a casual reader to engage with the subject-matter. All in all this is an imposing publication, very suitable to present to an enthusiast with limited French, and no doubt already bearing fruit by being laid on the coffee tables of ministries, town halls and hotels in France and elsewhere. Its production represents a considerable achievement by the two principal authors.

Really there are several books combined in this volume. The first is a sort of documentary, 'The amazing history of the Atlantic coast, its sailors and ships'. Most nations active in marine archaeology or possessing a national maritime museum could produce such a feature, and many have done so: this is a worthwhile effort by the French. The second component book is more polemical, and might be entitled, 'The amazing value of underwater archaeological work on

the Atlantic coast of France'. Here the authors engage (sometimes explicitly) in a tussle unique to France, with its two coasts of which the southern is so much richer in ancient wrecks; the Atlantic-coast specialists necessarily call on colonial or imperial history, or the story of navigation, to provide a context for the often fragmentary finds from the north-west.

The third component is a fairly standard subject, familiar from many countries and authors, along the lines of 'Man and the Sea', complete with lists of key wrecks, simple outlines of shipbuilding history, explanation of tree-rings, and so on. Non-French readers will most likely already have their own version of this sort of thing. The fourth component is potentially the most interesting, namely 'Maritime Archaeology as seen and practised by L'Hour, Veyrat and colleagues'. There are the seeds here, scarcely developed, of a really interesting and novel book about maritime archaeology. Unfortunately the format and scale of the present volume prevent development of this theme, and all too often, just when a discussion is getting going, the authors break off with 'further study of these finds/this site/the period … will, we are sure, shed much light on the history of technology/imperialism/class'. The contributions by Olivia Hulot, for example, on the importance of ships' bells, are especially interesting, and one would welcome a whole book on maritime archaeology by any or all of these three authors.

On the whole the volume under review has a good command of English documents and comparable finds or sites in other countries. There are occasional insularities—notably where the Channel Islands are excluded from consideration, even when the context is geographical and regional rather than state-political. Given the enormous scope of the volume, it would be unfair to pick on the occasional lapses of information about non-French sites; I noticed only one misprint. All in all, an excellent volume, a pleasure to handle and read, and one which could make a splendid introduction to our subject.

A. J. PARKER
Redland, Bristol, England

Keepers of the Record: the history of the Hudson's Bay Company archives

DEIDRE SIMMONS

360 + xvi pp., 80 b&w images, 2 maps

McGill-Queen's University Press, Montreal and Kingston, Canada, available via CUP Services, 750 Cascadilla Street, PO Box 9525, Ithaca NY 14851, USA, 2007, C$34.99/£22.99 (sbk), ISBN 978–0773532915

This unusual book addresses the nature of archive creation and survival, through a single, spectacular case, and the opening of those resources for research. The Hudson's Bay Company (HBC), established in 1670 as a chartered company with royal patronage, was, until the mid-19th century, both a trading concern and an imperial agency. That said, it was not especially large. In the first half of the 19th century the workforce in Canada doubled, from 500 to over 1000 with amalgamation with the rival North West Company. However, unlike the East India Company which was wound up in the late 1850s, the HBC survived the end of its role in territorial administration, at the confederation of Canada, to re-generate as a major commercial concern which still occupies a prominent place on the Canadian high street. This continuity helps to explain the survival of the Company's archives, which are a critical resource for historians of early exploration, local peoples, the fur trade, local government, business and archival methods, and much more. However, as Simmons stresses, these archives are largely the day-to-day, year-on-year business records of a trading concern which operated in two hemispheres: the head office in London being kept informed of activities in Canada by the regular transmission of written accounts, journals and other documents. She is equally clear on the need to view these records alongside those of other organisations, especially imperial and local government.

For the first 250 years of the Company's existence the archives were administered by the Company Secretary in London. In 1931 a professional archivist was employed, in part to exploit the company's history to generate favourable publicity. The following year the archives were opened to scholars. In 1938 the company set up the Hudson's Bay Record Society to produce edited documentary collections, although this ended in 1983, when such patronage became uneconomic. By then the archives had followed the Company headquarters from London to Winnipeg, Manitoba, and into the custody of the University. The move took place in 1974, and the Company archive and museum were donated to the Province in 1993.

While the bulk of the records are thoroughly business-like there are exceptions—those dealing with the exploration of Northern Canada and the Arctic, linking the fur trade with imperial concerns about Russian and American encroachment, have been used extensively. These expeditions also dealt with scientific research in areas ranging from botany to terrestrial magnetism, extending their range and interest.

As a transatlantic concern named for a major marine water area, the HBC depended on ships, while much of the internal trade was handled in boats. The fur trade through the Hudson's Bay saw ships voyaging into the bay every summer, to exchange goods and people with the Bay trade posts, which in turn relied on the rivers for much of their trade. The West Coast trade took far longer, up to two years for a return voyage, but was not seasonal. The introduction of steam-power on the west coast, the British-built paddlewheel ship *Beaver* of 1836 being the first, was

followed by the use of steamboats on the rivers of British Columbia, Alberta, Sakatchewan and Manitoba. As Simmons observes: 'The countless details involved in acquiring ships, hiring masters and crews, making arrangements of long voyages, and purchasing fuel and provisions, as well as finding supplies for the fur trade and for the commercial trade, have left many records' (p.128).

Aside from James Delgado's study of the best-known HBC wreck, *The Beaver: First Steamship on the West Coast* (Victoria BC, 1993), these sources have not been heavily used. A study of the HBC as an owner and operator of shipping on the Atlantic, the Pacific, in coastal waters and on the rivers is wanting. Such a study would highlight the fact that the HBC was an integral part of the Empire down to the 1860s, often acting as an agency of the British Government. This was particularly significant on the west coast, where the HBC linked up with the small naval presence to maintain order, and secure the frontier from American challenges. Between 1863 and 1870 the *Beaver* served as a Royal Navy survey ship for the coastal survey (Delgado, 1993: 14–15).

Today over 2000 shelf-metres of archive are stored in ideal conditions, with extensive manuscript, art and cartographic holdings, linked to a major library focused on the company and related subjects. Winnipeg may be a long way from the sea, but it is the centre for research on a major maritime endeavour, one which still has much to offer.

ANDREW LAMBERT
War Studies, King's College London

Redemption of a Slave Ship: the *James Matthews*

GRAEME HENDERSON

364 pp., 82 illustrations including colour, pull-out plan of brig as slave-ship, maps

Western Australian Museum, Locked Bag 49, Welshpool DC, WA 6986, 2009, AU$45/£25.64 (hbk), ISBN 978–1920843991

As long-standing readers of this journal will know, the wreck of the *James Matthews* was discovered in 1973. It had been lying 100 m from the shore at Woodman Point, just south of Fremantle in Western Australia, for over 130 years. Graeme Henderson first published data relating to the ship in this journal in 1975. In *Redemption of a Slave Ship*, Henderson returns to the *James Matthews* and uncovers a much darker and more complicated history. In the course of its short career, the *James Matthews* touched four continents and affected the lives of thousands of people. Put simply, it is a global object and this is the story that Henderson sets out to tell in the book. It also marks a seminal project in the outstanding development of maritime archaeology in Australia, here fully described.

When it was first discovered, the bare facts of the *James Matthews*'s history were easily uncovered. She had left London bound for Western Australia in March 1841 with 7000 slates, farm implements, a crew of 15, and three passengers when, nearing the end of her journey, she ran aground on sand in a semi-sheltered location. Falling on her starboard side and filling with sand, she remained on the shallow sea-bed for over a century. Despite hundreds of hours of work on the wreck, however, Henderson had no inkling of her dark past. Indeed, why should he? The usual sources, such as *Lloyd's Shipping Register*, offered up no information about the origins of the *James Matthews*. She was invariably described as a 'prize'. But it was with this crumb of information that Henderson pieced together a quite remarkable story.

Three years before leaving for Australia, the *James Matthews* was involved in a much more sinister form of transportation. She had just been captured by HM Brig *Griffon* for breaching international treaties abolishing the slave trade. The lieutenant commanding the *Griffon*, John D'Urban (the illegitimate son of Benjamin D'Urban), decided against dragging the ship all the way back across the Atlantic to be condemned at the Vice-Admiralty court in Sierra Leone as the law dictated. Instead, he brought it to Roseau on the Caribbean island of Dominica. While D'Urban's actions probably saved the lives of many of the Africans on board, it also ensured that they would never again set foot in Africa. The ship that became the *James Matthews* was then known as the *Don Francisco*, and she was owned by Don Francisco Felix de Sousa of Ouidah on the Bight of Benin, a notorious Brazilian slave trader. The *Don Francisco*, which was originally a French-built slave ship, had been travelling from Ouidah to Cuba under the Portuguese flag when she was seized by the *Griffon*. It was only after the *Don Francisco* was subsequently sold that the newly renamed *James Matthews* began to ply more respectable routes.

Henderson attempts to reconstruct and contextualise every aspect of this history. The narrative of this book takes the reader on a labyrinthine journey from West Africa to the Caribbean and beyond. It delves into such subjects as slavery and slave trading in West Africa, the lives of the enslaved on plantations in the Caribbean, the recruitment of Africans for British Army regiments, the resistance of the enslaved and the preservation of African religious and musical traditions in the Americas, the role of the French in the illegal slave trade, the abolition of the transatlantic slave trade, and Britain's 19th-century policing of the Atlantic Ocean.

With such a breadth of subject matter there is no lack of interest. However, there are some areas of slight confusion. For example, Britain did not trade more slaves than any other country, as is claimed on p.28. In fact, that dubious distinction goes to ships wearing the Portuguese flag. This is not, of course, to diminish

the involvement of British merchants, who were the largest slave traders in the 18th century and took the trade to truly industrial levels, sometimes shipping 40,000 Africans a year into slavery. Similarly, perhaps the somewhat puzzling appearance of David Livingstone and H. M. Stanley in relation to 'West Africa' on p.20 is an indication of the strong historiographical tradition of equating Livingstone with any 19th-century European involvement in Africa and the anti-slavery campaigns in general. It is also rather difficult to determine whether or not Royal Navy sailors were in favour of abolition 'heart and soul', as Henderson claims. Research indicates that there was a much more ambivalent attitude among men and officers alike. Indeed, more might have been made of the reasons why the Royal Navy was policing the waters of the Caribbean for slave ships like the *Don Francisco*, and what were the impulses driving this abolition strategy in Britain. Finally, the arrangement of the bibliography is slightly puzzling, with primary material interspersed with secondary sources. There are also some strange omissions from the sources used. For example, the work of Emma Christopher on slave ships and their crews, and that of Michael Craton on resistance in the Caribbean might have been usefully employed.

This is an extremely ambitious book that does not quite achieve everything it sets out to do. Nevertheless, it is a useful addition to the literature on transatlantic slavery. It is a handsome, well-illustrated volume that describes an object linking oceans and themes of global import. The *James Matthews* is a rare and important survival. As historians and museum professionals continue to struggle to make the Middle Passage comprehensible for 21st-century audiences, the archaeology of slave ships provides a crucial means of expanding our understanding of the horrific conditions endured by Africans. As one of the best-preserved wrecks relating to transatlantic slavery, the *James Matthews* has the potential to act as a symbol of the awfulness of the entire episode.

JOHN McALEER
National Maritime Museum, London

The Morocco Maritime Survey: an archaeological contribution to the history of the Tangier peninsula

(*British Archaeological Reports* S1890)

ELARBI ERBATI and ATHENA TRAKADAS

xii + 126 pp., 1 colour and 114 b&w illustrations including maps (not all numbered)

Archaeopress via Hadrian Books Ltd, 122 Banbury Road, Oxford OX2 7BP, UK, 2008, £33 (sbk), ISBN 978–1407303703

'Time spent in reconnaissance is seldom wasted'. This well-worn military maxim applies equally to archaeology, notably in such areas as the North African coast which have received far less attention than their evident potential justifies, particularly by comparison with the rocky and eroded northern coasts of the Mediterranean. Against this background, it is encouraging to welcome this well-produced volume, which belies its title. The word 'contribution' reveals that this is not a comprehensive summary of the evidence available for the area, but an account of survey work carried out within two sample areas, which are nowhere defined by geographical co-ordinates, but are instead indicated on small-scale maps (p.27, fig. 21 and p.37, fig. 34, effectively repeated as annotated satellite image p.57, fig. 58).

The project methodology was simple. Diver survey was carried out over periods of about a month during each of the 2002 and 2003 seasons. Nitrox was used at depths which rarely exceeded 24 m. Positional recording was by non-differential Global Positioning System (GPS) with an assessed accuracy of about 20 m. The standard of field documentation was evidently meticulous, although the artefact numbering series is of baffling complexity, and the absence of citation of accurate individual locations seriously limits the value of the published evidence. Furthermore, no description of sea-bed type and conditions is provided, and there is no reference to the incidence (or otherwise) of marine wildlife. Diagnostic artefacts were recovered and deposited in a museum at Tangier, but there is no mention of their subsequent conservation or display.

At this point, the perennial problem of the presentation of primary material is faced. The authors eschew the use of microform in favour of publishing the 67 significant artefacts individually (Appendix B). Predictably, most (87%) of these are anchors or portions thereof, while neither ship-timbers nor articulated wreck remains were identified. The majority are considered to be of Classical or earlier date, although four cannon and several iron anchors were discovered.

The presentation of the work is to the usual *British Archaeological Reports* standard, having a commendably-readable typeface and clear page layout; good use is made of footnotes. The drawings are adequate, if sometimes little more than outlines, but the same cannot be said of the photographs. Their generally 'muddy' reproduction significantly obscures much detail, notably in the satellite views and the underwater photographs. This criticism extends to the choice of illustrations, far too many of which record 'people at work', 'work in progress', expedition boats and equipment, or areas of landscape of no specified importance. Many of these could usefully have been omitted to allow larger reproduction of those considered more significant. The 'sun-illuminated perspective Digital Elevation Model … of the Cape Spartel anchorage' (p.42, fig. 40) is the only colour illustration, but offers no explanation of either the technology used or the significance of the subject. The use of annotated satellite images instead of drawn maps (figs. 26, 29 and

36) is a misuse of this form of illustration, presenting only a number of dots without evident explanation. Two numbered illustrations (figs 32 and 33) duplicate un-numbered drawings in the artefact catalogue.

The text displays a similar lack of balance. The lengthy geographical and historical background summaries (pp.3–26) are largely irrelevant to the task in hand. The concise and authoritative description of the bathymetry and hydrology of the waters around the Straits of Gibraltar (pp.7–11 and figs 8–9) is of value, but much or most of the space used in the introduction might have been better devoted to the provision of summaries of the typology and significance of the major types of artefact found. At present, the reader may justifiably query the significance of the specific types of anchors and amphoras which were discovered. Furthermore, much of the geographical material found in the introduction is repeated in the conclusion, which might have more usefully contained suggestions for further research. The absence of an introductory summary in English is regrettable, but there is much benefit in translating that provided in French, or that (presumably) in Arabic. The comprehensive bibliography is valuable in itself.

These strictures are severe, but they are well meant. This book does much to confirm the evident potential of the North African coast, but the cost and effort involved in the publication of such a small body of evidence in this form are disproportionate, as is reflected in the high cover-price. Instead, a comprehensive and integrated sites and monument record should be developed, updated, and made available through the internet. This project should be a beginning, rather than an end.

ROBERT J. C. MOWAT
Dunfermline, Scotland

Underwater and Maritime Archaeology in Latin America and the Caribbean

(*One World Archaeology series* 56)

MARGARET LESHIKAR-DENTON and PILAR LUNA ERREGUERENA (eds) with numerous Contributors

316 pp., 51 b&w illustrations, 10 tables

Left Coast Press Inc., 1630 North Main Street, 100 Walnut Creek, CA 94596, USA, also available via Oxbow, Oxford OX1 2EW, UK, 2008, $56.50 (hbk), ISBN 978–1598742626

This is a difficult book to characterize for a number of reasons. Born out of a series of lively and well-illustrated papers presented during the Fifth World Archaeological Congress in 2003, it is necessarily somewhat eclectic, and completely unique. The fact that the 'Underwater and Maritime Archaeology' theme, included for the first time in that Congress, amounted to 11 separate sessions suggests that the subject is no longer a side-show on the Broadway of international archaeology. Similarly, that the Latin America and Caribbean session was the largest, and lasted one full day, suggests that the region, once known only for treasure-hunting, is now producing impressive underwater archaeological research.

Editors Pilar Luna Erreguerena and Dr Margaret E. Leshikar-Denton, both exceptionally qualified for the task, organized 19 of the papers into chapters for this volume. Luna has headed the Department of Underwater Archaeology of Mexico's Instituto Nacional de Antropologia y Historia since 1980. Leshikar-Denton served with the Texas Historical Commission before moving to the Cayman Islands to practise underwater archaeology with the Cayman Islands National Museum. She has been the *de facto* Caribbean regional representative for the Advisory Council on Underwater Archaeology for nearly 20 years.

The 19 chapters in this volume offer an assortment of geographically and temporally wide-ranging topics and subjects: 17th-century Spanish nautical charts and measurement systems; 'early man' finds in submerged caves in Mexico; exploration of the sunken city of Port Royal, Jamaica; maritime archaeological tourism in Curaço and the Cayman Islands; shipwreck investigations in Mexico, Argentina, and the Turks and Caicos Islands; the role of environmental agents in the formation of underwater sites in Argentina; and even a new technique for conserving waterlogged glass. But the majority of the papers deal with the legislative and management efforts of our colleagues throughout Latin America and the Caribbean region to combat and curtail the rampant depletion of submerged archaeological resources. This of course is a global problem, but the warm, clear waters of the Caribbean are arguably the spawning grounds of commercial treasure-hunting, which, like a red tide, has spread to every corner of the world's oceans. There is some indication that the tide is finally turning. Edward Harris's succinct paper on Bermuda's shipwreck heritage reveals how, after a decades-long battle to save Bermuda's underwater cultural heritage from further ravaging, a new Historic Wrecks Act was passed in 2001 which 'may be the strongest such national legislation in existence'. His eloquent closing paragraph is well-worth repeating:

> Shipwreck heritage is no longer up for grabs in our waters and with UNESCO [*Convention on the Protection of the Underwater Cultural Heritage*], we say it should not be so in any other jurisdiction. Archaeology and treasure-hunting are often presented as two sides of a coin, as two valid points of view, but this has never been the case. As people everywhere try to hold on or reclaim their identities and heritage in a global world often at war with such individual cultural identities, it will be increasingly obvious that the only way to claim shipwreck heritage and to hold it for future generations is by the archaeological method. One would hope that many professionals, who take high-minded views in other areas of archaeology, will throw their weight into the international scene to promote the preservation of underwater heritage.

Not surprisingly, seven of the chapters are by Mexican researchers and deal with Mexican research projects. Four of them stem directly from a multi-year, multi-disciplinary intensive research effort by the Mexican Department of Underwater Archaeology dedicated to locating *Nuestra Senora del Juncal*, *capitana* of the ill-fated 1631 New Spain Fleet. Ironically, the genesis of this effort was the incessant pressure from commercial treasure-salvage companies to cut a deal with the government that would allow them to search for and salvage the vessel. Although *Juncal* has still not been found, the exemplary historical and archaeological research conducted by Luna's team is as fascinating as it is comprehensive. The six field-seasons of instrument surveys in the Bay of Campeche resulted in the compilation of an inventory of submerged cultural resources in the Gulf of Mexico. Two of the chapters are devoted to shipwrecks.

Perhaps one of the most important papers in the volume is Dr Wayne Smith's excellent discussion of the challenges of conserving waterlogged glass. The fact that only one paper out of 19 dealt specifically with artefact conservation is in itself instructive, clearly illustrating how few competent conservators and laboratories there are in the region in relation to the amount of fieldwork being undertaken. The two excellent chapters on surveys and excavations of submerged caves in the Yucatan appear to be the first and (at this writing) only publication outside Mexico of some truly ground-breaking research. I am now looking forward to more results from this exciting effort.

Speaking as one of the WAC-5 participants, it is unfortunate that no book can capture the vitality and sense of community that prevailed during the underwater sessions. The enthusiasm with which people from many different countries met, shared ideas, commiserated, and learned from each other was the richest part of the experience. A topic that often came up during post-session discussions was the desire for greater co-operation among archaeologists, historians, conservators and anyone else concerned with underwater cultural resource management in Latin America and the Caribbean. The creation of a web-site to facilitate this was discussed. Dr Donald Keith proposed the compilation of a database containing the names (or aliases) of known treasure-hunters, their company names, attorneys who routinely work with them, and histories of their *modus operandi*, which could be made available to any government official anxious to double-check the claims of a treasure-hunter trying to gain access to national waters. On the downside, some of the chapters are under-illustrated and all images are black-and-white, which is ironic considering that all of them were well-illustrated during the presentations, giving the book an overall stodgy, academic feel that some readers in this age of colour monitors, colour printers, and even colour cell-phones may find off-putting.

This book fills an important gap because until now no book on the submerged cultural resources of Latin America and the Caribbean region has been published. With the ratification of the UNESCO *Convention on the Protection of the Underwater Cultural Heritage* in 2009 as an international treaty, and its adoption by a growing number of countries in the Caribbean, the days of fighting off treasure-hunting projects are nearly over. Hopefully the next book on this rich and varied region will be able to showcase the ever-expanding number of ground-breaking and intriguing projects that are going on.

TONI CARRELL
Ships of Discovery, Corpus Christi, Texas, USA

Alan Villiers—Voyager of the Winds

KATE LANCE

307 pp., 60 b&w illustrations

National Maritime Museum, Greenwich, London SE10 9NF, 2009, £20 (hbk), ISBN 978–0948065958

Square-Rigged Ships: an introduction

ALAN VILLIERS

78 pp., 19 b&w photographs, diagrams, 4 maps

National Maritime Museum, as above, 1975 and 2009, £9.99 (hbk), ISBN 978–1906367691

The subject of Kate Lance's lucid and incisive biography achieved international fame as a journalist and speaker on the last years of square-rigged merchant sailing ships. His was an unsentimental view of his subject, for he had served in them as a young man, and knew how hard and cruel that life could be. Your reviewer remembers his robust observation (he was described as having a 'Cape Horn voice') when addressing the Maritime Trust's Ships' Committee on the proposal that the steel barque *Peking* might be preserved in the UK at the end of her time on the River Medway as the training ship *Arethusa*. 'You don't want to save all these old sailing ships', boomed Villiers, 'Their crews never loved them, and neither will we as they grow older'. The barque subsequently went to the South Street Seaport Museum in New York, but is reportedly in poor condition and seeking a new owner. At that time in his life, Villiers was living close to Oxford, and perhaps foresaw with apprehension the prettification of square-rigged sail that was already overtaking England's inland waterways like the Oxford Canal. He wanted merchant sailing ships, and the people who sailed them, to be remembered and respected for what they achieved, and not simply coloured by posterity with the rosy hue of selective nostalgia.

Born to a Melbourne tram worker and his Irish Catholic wife, Villiers was no stranger to hardship from his early years. He worked an early-morning paper round throughout his schooldays from the age of nine. The sight of sailing ships in the port of Melbourne broadened his horizons, but his book-loving father was ambitious that Villiers should pursue his education. The six Villiers children were left fatherless when Alan was 14. Within little more than a year, Villiers fulfilled his resolve to sail for a living, initially in the Australia-New Zealand trade. His second ship was the barque *James Craig*, now restored to full sailing condition in Sydney. Villiers loved the life, exulting in the freedom and the neat organisation that characterised an apprentice's life in that era. But his idyll ended suddenly when the steel barque *Lawhill* ran aground approaching Port Lincoln at night, and the impact pitched Villiers from aloft where he was helping to stow the fore lower topsail. The fall broke his pelvis (as was only revealed by x-ray 15 years later) and effectively ended his ambition to make the sea his profession in merchant sail.

Recovered from his injuries, he served two spells as AB in steamers, and hated them; ('alien steam' he called it). Apprehensive that square-riggers would shortly disappear for ever, Villiers resolved to document them in prose and, eventually, photography. He worked as a journalist and in 1923 signed on a whale-factory ship for a voyage to the Antarctic, cabling regular reports to the *Hobart Mercury* in Tasmania which earned him a favourable reputation. He sailed to Europe and back in the lovely Finnish barque *Herzogin Cecilie*, whose remains still lie off the South Devon coast, and reported from her on the European market for Tasmanian apples. Determined to film for posterity aspects of life on an unmodernised square-rigger, Villiers shipped in 1929 on the 40-year-old full-rigged ship *Grace Harwar* with a fellow-journalist, Ronald Walker, as collaborator in the film project. Both were employed as seamen, and the profession dealt another cruel blow when a heavy steel yard fatally crushed Walker as he worked aloft. The loss of his professional colleague and shipmate deeply affected Villiers, but hardly blunted his resolve to record for posterity the closing years of merchant square-riggers. More than 40 books flowed from his typewriter over a period of 50 years, and he collaborated in several others. Sailing ships and the men who worked them were central to all of them.

Kate Lance has evidently had the benefit of access to Alan Villiers' personal papers and journals. As a biographer she shows remarkable insight into her subject's character and motivation, identifying his youthful anxiety to meet his father's high expectations, and the feeling of insecurity following his father's unexpected death when Villiers was still at school. As a potential breadwinner, young Villiers had to overcome his scruples when leaving his widowed mother behind with four younger siblings. Later, as a free-spirited seafarer, Villiers was cautious about entering into emotional attachments, and the book brings a woman's insight into the anguish, reflected in Villiers's journals, when he was disappointed in love.

Villiers learnt all his seamanship by observation, and remarked that an observant sailor could learn most of the skills of handling a large square-rigger simply by watching and listening, for all the operations were carried out on the open deck. Preserved today at Mystic Seaport is the former Danish training-ship *Georg Stage*, which Villiers bought in 1934, renamed *Joseph Conrad*, and sailed around the world with a volunteer crew. He had no formal qualification to command, but learned a great deal during that two-year voyage, with repeated anxieties about paying their way and handling the full-rigged ship with volunteers, some of whom were less than loyal. In October 1936 he sailed the ship back into New York as the last of his funds were exhausted. Quickly he completed the text of *The Cruise of the Conrad* and sold the ship to replenish his purse. His first experience of command had included many harrowing moments, including accidental groundings on coral. But he had brought ship and crew home safely. Perhaps his father would have applauded this achievement.

The book is generously illustrated with more than 60 photographs, many taken by Villiers himself, for he usually had a camera with him from his first voyages. Some of these suggest that among the happiest periods of Villiers's life was his wartime service with the Royal Naval Volunteer Reserve. He had developed lecturing skills to earn a living, which the Naval authorities quickly recognised and appointed him to teach aircraft recognition at a shore base at Fort William, where his 'intellectual ability' and 'personal qualities' were assessed as 'exceptional'. But he yearned for action, and the Navy had the good sense to appoint him to Combined Operations, where he commanded a flotilla of American-built Landing Craft Infantry (Large), known colloquially as 'Lice'. With his robust, even unconventional, leadership style, he excelled in this role, where quick thinking and improvisation were often more important than observance of naval protocol. His squadron delivered thousands of troops to the Normandy beaches in June 1944, and Villiers' performance earned him the Distinguished Service Cross.

His wartime service left no time for authorship, but after demobilisation in 1946 he had a wife and family to support. Thanks to his excellent literary style (like Dickens and Kipling before him, he had learned brevity and clarity of expression in the hard school of journalism), and his skill with a camera, Villiers was soon contributing regularly to the National Geographic Magazine. In 1949 he published *The Set of the Sails*, a memoir of his life at sea until then. He averaged about two books each year throughout the 1950s. Lance quotes from his journals his admission that not all of his books met his own high

literary standard, where they had to be completed to a deadline.

Among the last of his books to appear was *Voyaging with the Wind*, published in 1975 for the National Maritime Museum which Villiers served as Trustee for some 25 years. The Museum's reissue of that book as *Square Rig Ships; an Introduction* provides a concise distillation of his experience at sea, beginning with the caution that 'the business of handling large square-rigged ships is not to be learned by reading, but by doing'. Again it exemplifies his concern for neatness and order, reiterating observations of the Greek historian and soldier Xenophon in the 4th century BC on the need for everything in a ship to be properly stowed where it can be rapidly found in the dark. He highlights the importance of physical and mental fitness for masters in sail, by whom no buck can be passed in difficult situations. Villiers had met and sailed with some of the greatest practitioners of square rig who ever lived. Men like Robert Miethe, who had commanded the huge 5-masted *Potosi* in the Chilean nitrate trade, who lived to nearly 100 and whom Villiers admired for 'having finished with school at 12, but never with learning'.

Villiers was perhaps ahead of his time in deploring the profligate consumption of fossil fuels which drove the last of the wind-ships from the oceans in his lifetime. It was more than mere nostalgia that prompted him to end *The Set of the Sails* with the characteristically-pithy observation that 'there should still be a place for the sailing-ship, in some form or other, while man must move his goods by sea and the ocean winds blow'. Future generations may have cause to thank Villiers for distilling his huge knowledge of the subject within 70 pages.

Both books include bibliographies and photo credits, and Kate Lance's biography is fully indexed, with several useful appendices and footnotes to each chapter.

JOHN ROBINSON
Stonehouse, Gloucestershire, England

Ships' Graveyards: abandoned watercraft and the archaeological site formation process

NATHAN RICHARDS

304 pp, 50 b&w figures, 15 tables

Society of Historical Research via University Press of Florida, 15 NW 15th Street, Gainesville, FL 32603, USA, 2008, $65 (hbk), ISBN 978–0813032573

Maritime archaeology often focuses upon 'accidental' shipwreck sites to study the socio–economic and technological aspects of ships and shipping. However, would one just study car 'accidents' when trying to study the role of the car in transport and society? A far larger source of evidence, and a relatively unstudied area of maritime archaeology, is the remains of purposely-abandoned watercraft in what the author of the book terms 'ships' graveyards'. This nicely laid out and presented book is thoroughly researched, drawing upon documentary evidence and field study of over 1500 abandoned watercraft which lie around the coast of Australia, dating from the time of European settlement to the late-20th century. The author has brought together historical and archaeological sources to highlight how abandoned watercraft can shed light on the cultural site-formation processes which have led to their abandonment and the remains which are found in the archaeological record.

The book consists of seven chapters, plus a concluding chapter, all written in a clear style and, for a 'theoretical' book, without jargon. The introductory chapter describes the background to the book, which is effectively a result of the Abandoned Ships Project, carried out by the author between 1992 and 1997 at the Department of Archaeology at Flinders University in South Australia. The methodologies and sources of information are described: and it is an impressive amount of research which, as well as the publication of this book, has led to the creation of the Australian National Abandoned Vessel Database. The author explains the terminology, and the various classifications of abandonment he uses throughout the book. The reader is given a taste of what is to come with effective summaries of the subsequent chapters, which nicely show the flow of the author's hypothesis.

Chapter 2, 'Abandoned Watercraft in History and Archaeology', is a good literature review of international examples of watercraft abandonment which, for this reviewer, living and working in Denmark, highlights that the biggest 'maritime' excavations there—Skuldelev, Nydam, the eight Renaissance wrecks at the Baumeister & Wein dock site in Christianshavn (see *IJNA* 36.2, 443), and the Roskilde ships—have all effectively been of abandonments of one form or another. Chapter 3, 'The Abandonment Process and Archaeological Theory', underpins the theoretical methodology behind the Abandoned Ships Project, and the application of site-formation processes, particularly cultural processes. However, more than that it is also a lucid, concise description of the use and development of 'theory' in maritime archaeology, and is supported with excellent references.

Chapter 4, 'Watercraft Abandonment in Australia: national perspectives', focuses on economic aspects and the effects of war and its aftermath on abandonment. The chapter contains numerous fascinating historical events, both in Australia and around the world, which have enabled the author to assess the abandonments in light of their historical context and to draw pertinent conclusions about the nature of technological change, maritime trade and economy.

The relationship between Britain and Australia can easily be seen—British domination of global trade between 1860 and 1914 having influenced the volumes of import and export into Australia and, furthermore, shipbuilding and ship-buying trends. Interestingly, British ships form about 25% of the total number of ships in the study.

Chapter 5, 'Watercraft Abandonment in Australia: Environmental and Regional Perspectives', considers both the nature of regional abandonment within Australia and also the effects environment (climate) has had on this. It is very interesting to note the author's comments that environmental catastrophe has not significantly affected abandonment in maritime regions, though events such as drought have marginally affected inland waterways. It seems that changes in the environment are not reflected in the abandonment patterns seen across Australia and the influence of environment on these trends is more related to the perceived threat—or 'fall-out'—effects of natural disaster which in turn lead to economic threats and reasons for abandonment. Regionally, the growth of rail links in Australia between 1870 and 1920 is reflected in the increased abandonment of both maritime and inland watercraft in the late 1910s and 1920s. A similar scenario is also seen with the development of the road network throughout Australia, albeit at a slightly later date, and even up to 1986. Changes in port infrastructure have also had an effect, and one learns that both ships and ports have had to adapt to changes in trading and ship design—not only in Australia but globally.

Chapter 6, 'Archaeological Signatures of Use', looks at the archaeological evidence for the use and subsequent transformation of watercraft, based on their abandoned remains. The author terms this process 'archaeological signatures', which are related to their use, modification and disposal. The chapter is illustrated with a very clear flow-diagram showing the site-formation processes which act on watercraft in their systemic context. Furthermore, the chapter discusses the evidence of transformation/conversion or modification of a watercraft during its working life. This has implications for the study of technological change and how, through analysis of the 'use-life' of watercraft, these signatures can yield evidence for the contemporary economy.

Chapter 7, 'The Signatures of Discard', in a similar vein to ch. 6 discusses the 'signatures' left in the archaeological record prior to and following discard. Such factors as removal of structure, rigging, contents of the ship and, conversely, addition of materials to make sure the abandoned watercraft stays where it is discarded, are all discussed. Again the chapter is illustrated with a useful flow-diagram of the various processes, showing the transition of a vessel from its systemic to its archaeological context.

In this reviewer's opinion, the book uses the study of site-formation processes to enhance the interpretation of the maritime archaeological record on a generic scale. The book is not only a fascinating study of shipping in Australia from the remains of abandoned watercraft, but has much wider implications for anybody studying site-formation processes in maritime archaeology, and for maritime archaeology in general. A very stimulating and thought-provoking read.

DAVID GREGORY
Conservation, National Museum of Denmark

The Slopemasts: a history of the Lochfyne skiffs

MIKE SMYLIE

160 pp., 170 b&w illustrations

The History Press, The Mill, Brimscombe Port, Stroud, Gloucestershire GL5 2QG, UK, £12.99 (sbk), ISBN 978–0752447742

Mike Smylie knows all about 'slopemasts', the affectionate nickname universally applied to the distinctive Lochfyne skiffs which plied the fishing-grounds off western Scotland from the late-19th century until quite recent times. He once owned one, the *Perseverance*, built at Campbeltown in 1912. Smylie found her in Portugal in 1990, some 10 years after she'd been converted to a gaff ketch by the Falmouth boatbuilder Chris Mitchell. In her final guise as a cruiser she was a very different vessel from the open-decked fishing-boat seen soon after her launch (p.98), with a single forward-placed mast and 13.5-hp petrol/paraffin Kelvin engine. As the gaff ketch (pictured on pp.96 and 100) to which she eventually metamorphosed, she has a much fuller sailing rig, with a mainmast set further aft (now without its distinctive slope), an extended bowsprit, and a mizzen aft. Almost three-quarters of her original timbers had been replaced, and her interior converted for cruising.

But she was still a Lochfyne skiff, and her generous sailing characteristics prompted Mike Smylie to delve into the history and origins of the type. This book presents the fruits of his research. He first considers the origins of the herring fishery on the west coast, and particularly in Loch Fyne, up to 1845. Of particular significance, he suggests, was the development of ring-net fishing, a technique which required the collaboration of two boats. The evolution of vernacular craft, here as elsewhere, is often difficult to trace, since traditional boatbuilding generates little contemporary documentation. Smylie emphasizes the probable influences of Norway skiffs, often imported in kit form for assembly by local boatbuilders, and of the indigenous wherries characteristic of the Irish Sea, western Scotland, and the Isle of Man. A fine early-19th century aquatint of such a wherry by the artist William Daniell is reproduced on p.25. Wherries

could be quite substantial vessels of up to 10 tons, and as Smylie argues might well be the progenitors of decked fishing craft of later eras.

Although the Lochfyne skiff has become a widely-recognised vessel-type, vernacular craft rarely fit a formal design envelope, and Smylie devotes ch. 4 to considering its defining criteria. These include an edict by the Registers of Sea Fishing Boats that vessels so-called 'are regarded as being over 4 tons burthen and built after 1882'. The chapter contains a useful collection of photographs of the vessels, including several dating to the late-19th century. There are also construction, sail, and lines plans of the type, competently drafted by the author, although the sources on which he bases them are not specified. The chapter also includes an explanation, again with clear illustrations, of rigging details and how paired Lochfyne skills operated a ring-net.

By the first half of the 20th century most skiffs were either built with motors or converted to them, and this aspect is considered in ch. 6. The deep raking sternpost and downward-set skeg did not lend themselves to the boring of a propshaft tunnel, so the propellers were aligned to emerge from the starboard side of the hull—an awkward arrangement which ultimately brought about the demise of the type as the dominant fishing vessel in the area. This chapter sensitively explores tensions between tradition and innovation in an inherently conservative fishing culture. Much of the chapter preceding it, however, which chronicles in detail the development of the Kelvin engine by which most of the skiffs were powered, goes well beyond what is required by the thread of the book, and is a distraction.

The book ends with well-researched histories of the author's own sadly-defunct *Perseverance*, and of two modern survivors, *Sireadh* and *Clan Gordon*. Finally, various examples of motorised ring-netters in the skiff tradition are presented, including the *Glen Carradale*, the wrecked remains of which were recorded by the author near Lochaline on the Sound of Mull in 2001.

For all its lack of pretension this is a serious work, representing much research, fieldwork, and an understandable love of the subject. Unfortunately its value to other researchers is diminished by a lack of references and picture sources. This may in part be due to the influence of the publishers, many of whom now seem to feel that scholarly apparatus is off-putting to the wider reading public. This is surely not so: discreet superscriptions are scarcely noticeable to the general reader, while no-one can object to a section of footnotes and sources tucked away at the end of a book. And many readers—not just academics—find it useful to be directed towards further reading and the sources on which the author has based his argument.

A similar criticism can be directed towards the copious illustrations, most of which come from private collections, mainly the author's. Few are credited beyond this, so cannot be accessed by interested readers or picture researchers. Nor are all the pictures relevant (though many are), and the images as a whole display a general lack of cohesion and integration with the text. The author himself hints at a reason for this in his 'Introduction', where he points out that the best source of pictures of Lochfyne skiffs is the MacFee Collection in the National Maritime Museum at Greenwich, which could not be used because of the high fees charged for reproduction. The implication is that the pictures were selected on the basis of economy rather than relevance. This seems a pity, and both publishers and repositories of such material would do well to take note. This trim little volume, for all its merits, has unnecessarily been diminished by the want of a ha'p'orth of tar.

COLIN MARTIN
University of St Andrews, Scotland

Lighthouses of Wales

(*Landmark Collectors' Library*)

ANTHONY DENTON and NICHOLAS LEACH

96 pp., over 100 colour illustrations, some b&w photos and drawings, 1 map

Landmark Publishing Ltd, The Oaks, Moor Farm Road West, Ashbourne, Derbyshire DE6 1HD, UK, 2008, £7.99 (sbk), ISBN 978–1843064596

Shipwrecks of Ceredigion

WILLIAM TROUGHTON

104 pp., 17 b&w illustrations, 5 local coast maps

Ystwyth Press, Swn-y-Nant, Cliff Terrace, Aberystwyth, Ceredigion, SY23 2ND, UK, 2009, £9.99 (sbk), ISBN 0955212502

For many years this reviewer has observed Welsh lighthouses from offshore—their features or colouring giving them daylight identity—and, occasionally, listening to their individual sound signals or broadcast RDF during poor visibility or, during night watch, straining to pick up the distinctive blink of light. Yes, lighthouses are a wonderful and ancient invention! This happens to be the third book I have recently read about Welsh lighthouses, and each has been interesting in different ways. Douglas B. Hague's *Lighthouses of Wales: their Architecture and Archaeology* (1994) is a fine academic history of the early development of these lighthouses, and his elegant drawings of the original Flatholm and Smalls lights (pp.24 and 52) are included in Denton and Leach. Hague's book is four

times longer than the others. At the other extreme, Margaret Hugh's *Anglesey Lighthouses and Lifeboats* (2004) is a genuine pocket-book but well handled within its limits. Denton and Leach's slim volume is more of a gazetteer, having two or more pages of text per lighthouse, and falls between the two. It offers a format for quick and easy reference both visually and to key information, so a background browse rather than a check on the hoof informs its style. Amazing value for £7.99.

Lighthouses of Wales introduces 36 existing lights from the Bristol Channel clockwise round the coast past Anglesey to the Point of Ayr guarding the approach to Chester on the Dee (an important medieval port). These form a distinct and compact group including several of significant architectural and historic interest. The placement of Welsh lighthouses reflects the rise and decline of trading ports, with Bristol and Liverpool initially dominant at the opposite ends of the coastal crescent, then the South Wales coal ports centred on Cardiff and Newport. More recently the natural harbour and tanker terminal of Milford Haven and the Irish ferry ports have acquired lights, and, always, a cluster covering the dangerous waters round Anglesey for the sea trade *en route* to the Mersey. This North Wales cluster boasts the second-earliest light in the range, originally proposed in 1658 and built in 1717 on the rocky outcrop of the Skerries off Holyhead, and which proved so profitable in dues from passing shipping that it remained in private hands until 1841 and has some of the oldest lighthouse dwellings anywhere.

Other curiosities include Flatholm, established in 1737 on an islet in the mouth of the Severn estuary, which has gone through a number of adaptations and now stands a proud white tower in the middle of the shipping lanes where the Bristol Channel narrows into the estuary. The tidal range here is the highest in the world. The Smalls lighthouse on a wave-washed rock 21 miles west of St David's Head in the Irish Sea has one of the most extraordinary histories, partly relating to the original prefabricated timber tower on legs enabling the seas to wash through them and with foundations rock-hewn by Welsh miners (1775–8). It was designed by Henry Whiteside, a musical-instrument-maker from Liverpool. Today the tower is 141 feet high, its silhouette resembling Smeaton's Eddystone curves, and with a helipad on top. Whitford Point light, warning of sandbanks off Llanelli (1854) was the only cast-iron British lighthouse It is now an Ancient Monument and is for sale for £100,000 to anyone who is willing to repair it. For centuries St Ann's Head lighthouse (1714) was the only navigational aid on the Welsh west coast (though today there are the remains of three).

A map of Wales places the lighthouses in their geographical context—though without naming the ports they serve nor the seas and waters that wash past them. The brilliant colour photographs are the outstanding feature and signature of the book. Most are by Nicholas Leach. Each entry has one or more full-page colour 'portraits' of the named lighthouse, though inevitably these are 'blue sky' studies showing their subjects at their smartest and most appealing. In support, however, inserted in the text are smaller secondary images—some colour, others from early postcards in black-and-white—fixing on unusual details or special characteristics. The book's design is striking and convenient, printed on very good quality paper; strong, semi-gloss with blue-grey margins throughout for basic facts, picture captions and other simple inserts. Each opening margin gives 'Established', 'Current Tower', 'Operator', 'Access', and, if necessary, 'Discontinued' or 'Automated'. The book has a brief 'Chronology' column and index; a helpful glossary of lighthouse terms, and a list of relevant web-sites—altogether a fine compendium and 'come-on' for the holiday visitor, itinerant enthusiast and archaeologically-inclined reader alike. A grand tour of the Welsh sites beckons.

There is one caveat: my copy of the book is disintegrating! The binding is edge-glued and the paper stiff; opening and closing has begun to crack the seams and further use will result in a pile of pages. I am happy to stitch my copy across the spine to keep it together, but others may not be so keen.

A postscript concerns William Troughton's *Shipwrecks of Ceredigion* (Cardigan). This rather personal little book provides a useful supplement to *Lighthouse of Wales* since it metaphorically 'digs up' 222 old wrecks from the 100-mile shelterless crescent of Cardigan Bay. This shore has been a remorseless trap over centuries for sailing vessels and low-powered ships on passage up and down the coast with trade goods for distant industrial regions. The prevailing westerlies turn it into a lee shore with only five estuary-mouths for shelter, and offshore sandbanks often deny these—an inhospitable reach indeed. Troughton divides his material by the areas between the five estuaries, for which each has it own sketch map with the wrecks (showing their rigs) marked and sometimes named. Wreck information and identity is mostly derived from short reports in local newspapers, copied verbatim. Archives in the National Library of Wales and county courts where Admiralty suits were heard have also contributed. Artists' contemporary drawings and paintings reproduced in black-and-white are a feature, and there are a few photographs of wrecks from the past century and a half. Despite the perils of Cardigan Bay, Troughton abundantly illustrates the volume of traffic—and shipwrecks—along this coast both before and since lights have helped to limit them.

OWAIN T. P. ROBERTS
Amlwch, North Wales

Archaeology of the Russian Scare: the Port Adelaide torpedo station

(*Maritime Archaeology Monograph Series* 18)

MARTIN WIMMER

76 pp., 39 b&w illustrations

Flinders University Department of Archaeology, GPO Box 2100, Adelaide, S Australia 5001, 2008, AU$17, ISBN 978–1920736378

Lighthouse Archaeology: the Port MacDonnell and Cape Banks Light

(*MAMS* 19)

BENJAMIN l. HOLTHOF

65 pp., 29 b&w illustrations, 3 tables

as above, ISBN 978–1920736385

Archaeology of the Russian Scare sets out (ch. 1) with a research question about whether archaeology can shed any light on changing attitudes to coastal defence in South Australia between 1877 (when a military engineer was appointed state governor) and 1924 (when the management organisation changed). Like whaling stations, this is a site-type which bridges historical and maritime archaeology, with remains on land, on the foreshore and under water. Chapter 2 discusses the history of military archaeology in Australia. This is followed by the historical background to the site, including an explanation of the 'Russian Scare' of the title. British troops left Australia in 1870, at a time when Russia had growing imperialist ambitions, and fears and rumours of the presence of a Russian fleet in the Pacific persisted until the defeat of the Russian navy by Japan in 1905.

The Torpedo Station opened in 1885, and was dismantled in 1917. The site has subsequently been used to dump waste building materials in an attempt to prevent erosion. Despite this, however, the site is worthy of record because it is rare, if not unique, in South Australia. A desk-based assessment was followed by site survey using a 'total station' and photography. A magnetometer survey was also carried out in the inter-tidal mud and within the remains of an artificial harbour, not helped by the large quantities of metal debris on the site. Air photographs were studied, and wood from the stump of a beacon analyzed. Exotic plant species were investigated as potential evidence for the torpedo station and its residents. The results are clearly explained.

The research question, however, could have been answered almost wholly from documentary and pictorial sources. It is really not clear how much archaeology has added to this picture, other than minor details about the lifestyle of the inhabitants, the dismantling of the station, and subsequent uses of the land. Chapter 7 lists several unanswered questions, but none is of much significance, although there is some potential for public interpretation. This publication is well written and well illustrated.

Lighthouse Archaeology starts with a literature review of archaeological work on lighthouse sites around the world, including 11 in North America, one in Australia and one in New Zealand. This is followed by a brief history of lighthouses, concentrating on South Australian examples. The first open-fire type was lit in 1793 at South Head, Port Jackson (Sydney Harbour, New South Wales), with the first stone tower following on the same site in 1818. South Australia was the most active state in establishing lighthouses and other navigation aids, and Port Adelaide's Trinity House was established in 1852. The federal government took over control of lighthouses in 1915, and planned further construction and improvements which took many years to implement.

Port MacDonnell lighthouse was finished in 1858, but Cape Northumberland, where it was built, suffered from erosion, and it had to be abandoned. The replacement lighthouse, further inland, opened in 1882. The old site lies within a Heritage and Nature Park opened in 2001, and the ruins are protected by a boardwalk and the growth of vegetation. The site was surveyed as well as the scrub cover would allow, and the impacts of vegetation growth and human activity were assessed. Cape Banks lighthouse was built in 1882, incorporating the light from the abandoned Port MacDonnell lighthouse. Built on a consolidated sand dune, it sits within Canunda National Park, and the light is still operational. It is now automated, however, and since 1928 the associated buildings such as keepers' accommodation have been abandoned. This site was also surveyed, and the impact of erosion, vegetation growth, and human activity recorded. Management issues are then discussed, and suggestions made for future managements and the potential for further archaeological investigation.

The illustrations are well-chosen, informative and reproduced clearly and at suitable sizes. The text, however, is often ungrammatical, and very repetitive. More radical editing and a more imaginative approach could have made this publication easier to read, and more appealing to a wider audience.

PAULA MARTIN
Institute of Archaeology, University College London

Sunk on the Sunrise Coast: 400 Sole Bay shipwrecks

PETER HANCOCK

192 pp., 12 charts, 133 b&w illustrations, 27 in colour

The History Press, Brimscombe Port, Stroud, Gloucestershire, UK, 2008. £18.99 (sbk), ISBN 978–0752447476

This is a surprising book, amalgamating as it does a vivid journalistic style with the depressing saga of

loss of life, poverty, hardship and catastrophes on the dangerous coast of East Anglia. Students of English coastal shipping will be familiar with *The Southwold Diary of James Maggs*, Richard Larn's *Shipwreck Index of the British Isles* and *Lloyd's War Losses*; on these and other records the author draws extensively. Peter Hancock has a pedigree of thousands of miles of ocean sailing and three books to supplement his first-hand knowledge of the archives of Southwold's *Alfred Corry* Lifeboat Museum, where he serves as a steward and which he uses to illustrate his text. He writes in the first person and takes the reader with him when he looks at a scene. From time to time he creates word-pictures and dialogue inspired by contemporary records. While these are appropriate and help his story along, some readers may find the device unsettling in an otherwise factual account.

The book begins with two maps which show the estimated coastline in AD 850 and 1575, followed by a series of charts of increasing accuracy which mark the shifting sandbanks. The 1868 Wreck Chart of the British Isles shows the densest concentration where 'during the nineteenth century Sole Bay accumulated eleven wrecks for every mile of its coast.' The most famous event on this coast, the Battle of Sole Bay, is hidden in the chapter on 'Ships and Cargoes' and is told in a mere four brief but lively paragraphs. There are 27 pages allocated to tables listing the known shipwrecks in date order with the source of information. Unfortunately Gillian Hutchinson is referred to as Gillian Harrison throughout. Not all the shipwrecks can be named, and it is not until 1875 that the number of crew is regularly known. The most numerous listing in the shipwreck chronology is the square-rigged brig. Brigs were replaced by fore-and-aft rigs, mainly spritsailed barges, which could be handled by a smaller crew.

The dangers faced by the beachmen who went out to ships in distress are well described. Their rewards could be considerable; in 1852 the men who saved *Victoria* each received the equivalent of three month's wages. The way in which the companies of beachmen and pilots operated and their rivalries are vividly told in a chapter devoted to lifeboats. After the North Channel pilots were posted to Harwich in 1899 the beach companies declined. Long before this the Southwold lifeboat service had been created following the terrible losses of 1839, while from 1826 the Suffolk Association had maintained a boat at Sizewell Gap. No. 1 'wet' lifeboats required the combined efforts of 50 men to launch them. Details of Southwold's No. I lifeboat, *Alfred Corry* (1893–1918), now preserved in a lifeboat house at the harbour entrance, and photographs of three of her coxwains, forms an appendix. Another is devoted to the Beaufort Scale.

The last chapter 'The People and Their Captains' provides a gripping synthesis of the hardships and cruelty endured by ocean-going seamen (on the basis that some of them came from, and many passed, this coast) in the last days of sail.

VALERIE FENWICK
Blaxhall, Suffolk, England

Maritime Archaeology for Beginners

SILA TRIPATI

156 pp., 40 b&w illustrations, 1 table

Kaveri Books, 4697/5-21A Ansari Rd, New Delhi-110002, 2009, 495 rupees/£29 (hbk), ISBN 978–8174791030

Sila Tripati has produced a rather unusual book. *Maritime Archaeology for Beginners* is in fact what it says it is: it is for beginners. It contains the basics of what maritime archaeology is about, set in the unusual format of about 200 questions for each of which Tripati gives an answer, all within the first 124 pages. The book is written for an Indian audience, although it could be useful elsewhere. There are a lot of grammatical problems with the text: 'Unlike anchors, sails also play a vital role in maritime trade'. It would be churlish to poke fun at this book, because it is a genuine attempt to make the subject more accessible to a wide audience which is not necessarily conversant with the field.

After the 200 or so questions and answers, the book seems to diverge. There are two pages of suggested reading, then a chapter entitled 'An Introduction to Maritime Archaeological Explorations in Indian Waters', which is a brief but interesting review of what is happening in India. Then another 'Selected Bibliography' ($2^1/_2$ pages) and then 'Some Facts of Maritime Archaeology and Related Aspects of the Sea', a list of 100 'facts'. These range from: 'In diving, both inhaling and exhaling are done through the mouth, because the nose is covered with a mask', to 'To date not a single maritime archaeologist has been attacked by a shark', and 'Until the 15th century, most European ships were square rigged which meant they could only sail in much the same direction as the wind'. It is unfortunate that at times these facts, and others in the book, are hopelessly wrong: 'Underwater explorations at Dwarka have yielded the largest number (123) of stone anchors in the world'.

I suppose the audience, as beginners, is expected to be relatively unlearned. The book would work quite well as a school book, but my feeling is that it should have more references to further reading matter, thus helping the reader to learn more about the subject. It is very difficult to review a book like this because its audience is going to know nothing about the subject, so the text has to be very simple and stimulating. I think Tripati has done a good job with a very novel approach, but it is a pity that at times it is spoilt by a few inaccuracies and omissions.

JEREMY GREEN
Western Australian Museum, Fremantle

