Maurice Cocker. *Royal Navy Submarines 1901 to 2008*. Barnsley, S. Yorks: Pen and Sword Maritime, www.pen-and-sword.co.uk, 2008. (Originally published 1982.) 136 pp., illustrations, tables, appendices, bibliography, index. UK £14.99, US \$29.95, paper; ISBN 978-1-52679-190-0.

This second edition of a book first published in 1982 is a basic reference book on the subject of Royal Navy (RN) submarines from the inception of the technology to the present. It is high level in that it covers the essentials of the designs over the past century, without getting into every detail associated with modifications or refinements within basic classes. It also has minimal information regarding operational histories of the boats described in the book, leaving that to other, readily available accounts. The one historical detail it does include is a brief listing of the fate of the individual boats, with those not noted presumably surviving to be scrapped in the normal course of events.

Both editions include a brief forward, the first by Vice-Admiral Sir Lancelot Davies and the second by Admiral Sir James Perowne, along with a

concise introduction to the topic within the Royal Navy. There is no intention whatsoever to provide an account of the role of submarines in RN thinking or its evolution over time, with experience gained with this new weapon of naval warfare that emerged in its nascent form in the last years of the nineteenth century. With these perhaps too brief preliminaries out of the way, Cocker presents (generally) a two-page summary of each class of boats operated by the RN, starting with the Holland design of 1901. There were five boats in this class, which were essentially experimental craft intended more as proof of concept than as frontline assets to be used in war. Results were sufficiently encouraging to continue with this novel class of warship by designing and building successor classes in the decade plus runup to the Great War. Accounts for each class generally include a line diagram of the design, a table of specifications and performance metrics, and a number of notes that vary in detail based on need. Photographs and a list of the losses of each class rounds out the information provided.

The book notionally covers submarines that served in the Royal Navy, but

The Northern Mariner / Le marin du nord, XXXI, No. 4 (Winter 2021), 449-482

there are entries for vessels that were intended for foreign navies. The S and W classes prior to the Great War were Italian designs, built in British yards, for the Italian navy. The reason for their inclusion here is not entirely clear – admittedly two of the S-class boats served for a few months with the RN prior to being turned over to the Italians in 1915. but this incidental service was brief and presumably connected to Italy's uncertain adherence to its alliance obligations to Germany and Austria-Hungary at the time. It also includes information on German U-boats that were used for trials purposes after both world wars to help improve British designs. As there was never any intention to include them in the RN submarine inventory, their inclusion here is a little idiosyncratic.

A significant drawback to the book is the absence of a narrative that links the various designs to each other, and how the art of naval architecture evolved with experience, an absence the more regrettable in that the author is a naval architect. This is particularly unfortunate in the period prior to the Great War when technical evolution was both dramatic and remarkable. When one considers what now seems the extremely primitive Holland design of 1901, with the E class of 1912, one can only be astounded. The book would have benefited enormously from a discussion, however brief, of the improvements implemented in the A through D classes that clearly led to the highly successful E class. How this was achieved would have been a useful addition to the book. Indeed, the lack of such information is glaring where you have a number of classes comprising one or two boats, followed by subsequent classes that profited from the lessons learned by their predecessors. One is left to assume or guess.

The evolution of British submarine design is an interesting study and, by the

nature of this account, easily followed in its basic trajectory. Some fascinating side trips included the notion of submarines accompanying a battlefleet resulting in designs that were comparatively speedy on the surface but suffered significant shortcomings in traditional submarine functions. Later still, the M class of 1917 incorporated a 12-inch gun, with one of the class having the gun removed and replaced by a hanger and a seaplane. After each shot the submarine needed to surface to reload – although it could apparently fire with the barrel poking out of the water (along with the conning tower). Another class, the X1 class of 1923, featured two turrets and was clearly experimental with a view towards an anti-merchant-shipping role. It was a failure and the concept was not repeated.

Notwithstanding some of the reservations noted, the book is a helpful guide to the Royal Navy's submarine fleet over the past 120 years and will provide a quick reference for anyone needing to know the particulars of a given class. It is also a sobering reminder of the number of losses of RN submarines in both wars, as well as a steady series of peacetime losses due to misadventure. The courage and fortitude of submariners is a byword throughout the naval profession (a point which we have been reminded of with the tragic loss of the Indonesian submarine KRI Nangga*la* 402 on 21 April 2021), but the very first were extraordinarily brave to put to sea in the contraptions of the day as is well attested in Cocker's useful, if short, reference book.

Ian Yeates Regina, Saskatchewan

Howard J. Fuller. Turret versus Broadside: An Anatomy of British Naval Prestige, Revolution and Disaster 1860-1870. Warwick, UK: Helion &

Co., www.helion.co.uk, 2021. 416 pp., illustrations, appendices, bibliography, index. UK £35.00, paper; ISBN 978-1-91333-622-6.

In Turret versus Broadside: An Anatomy of British Naval Prestige, Revolution and Disaster 1860-1870, Howard Fuller outlines the social and political factors surrounding the debate about the Royal Navy's adoption of turreted ironclads from 1860 to 1870. To a much more limited extent, he discusses how the loss of HMS Captain affected those discussions and subsequent events.

The author has taken the time and effort to extensively note and reference a wide variety of sources. The use of published and archival documents allows the discussions that occurred before and after the sinking, to be put into context. Furthermore, the use of American documents enables the reader to examine the role and influence of the events discussed, from the perspective of parties on both sides of the Atlantic Ocean. It also presents previously published work on the subject to be viewed in another context. While the thorough research is very useful, and students looking for period documents will find a wealth of documents to explore, the extensive footnoting throughout the book is potentially disruptive to more casual readers.

Students of maritime history will find this book useful in several ways. The decade discussed saw advancements in several technical fields, and these had long lasting effects on the established culture within the Royal Navy. Individuals interested in the engineering and mechanics of ship stability will find the discussions regarding the use and suitability of sails on ironclad warships most useful. Fuller also tackles the role of politics and public opinion in the procurement and design of naval warships. One of the driving factors throughout

the discussion is the fact that these advancements and changes were occurring in several nations simultaneously. The back-and-forth between nations and new technologies and improvements to existing ones is a recurring theme throughout this work and illustrates that none of the events discussed were occurring in a vacuum.

One of the book's more interesting contributions for American students of naval history is the way it frames events occurring in Europe during the American Civil War. It positions the events and effects of that conflict within a wider context. It also sheds light on how new and advancing technologies and the requirement for nations to meet or exceed the capabilities of their neighbours can drive decision-making. Like the dreadnaught race that would occur in the following decades, the emergence of new technology in the fields of propulsion and armament threatened to start an arms race between the powers of Europe and introduced instability to the continent. By the same token, including the role of politics and diplomacy in the work invites students of history to explore events beyond the maritime sphere.

Casual readers may find this book less accessible. It does not offer a narrative discussion of the loss of the ship or the lives of its crew. The technical nature of naval architecture and discussions of stability, while not requiring an extensive engineering background, may be of less interest to readers wanting to know more about the loss of HMS Captain itself. In fact, so much time is spent discussing the events surrounding the need for and the construction of the ship, that comparatively little is spent on the sinking and its aftermath. The same caveat generally applies to a knowledge of British politics. While not essential, an understanding of the dynamics of British politics during this period is useful. Readers looking for an account of the personal loss resulting from a maritime disaster, and the broader affects it has on society, should probably look elsewhere.

Turret versus Broadside: An Anatomy of British Naval Prestige. Revolution and Disaster 1860-1870 provides something for students in several historical disciplines, though it may not satisfy students searching for a specific historical perspective. While some may find it too technical and non-narrative, it offers a useful perspective for examining events of the late-nineteenth century, and the effects of the rapid technical innovations that were taking place at that time. The author does not advocate for either side of the debate, but leaves it to the reader to decide which school was the correct one.

Michael Razer Ward, Arkansas

Gareth Glover. *Nelson's Navy in 100 Objects*. Barnsley, S. Yorks: Frontline Books, www.frontline-books.com, distributed by U.S. Naval Institute Press, 2021. 301 pp., illustrations, notes, index. UK £25.00, US \$49.95, cloth; ISBN 978-1-52673-132-6.

Gareth Glover, whose primary focus has been the land side of the Revolutionary and Napoleonic Wars, has gathered images of 100 artifacts, paintings, drawings, and maps to illustrate the Royal Navy during the era. As the ultimate naval icon of the age, Horatio Nelson centres the book. This is the author's fourth publication of a book of 100 objects, the other three concerning the Battle of Waterloo, Napoleon, and the Duke of Wellington. It is a high-quality book with a shipload of stunning images.

The book begins with a basic biography of Horatio Nelson, touching on his life, early years at sea, his notable

battles and injuries, his death and funeral. His reputation was a standard for other naval officers of the time and many, indeed, rose to the challenge, performing their duty for country nobly and with great effect. After the brief bio, the author sets about laying out the stories surrounding the objects, dealing with entities like the Admiralty, the Royal Ordnance Department, the Navy Board, and the Transport Board. Glover discusses ship construction, sails, and sail handling, ship maintenance, innovations during the period and, at the end, the ultimate fate of several key ships (Foudroyant, Clyde, etc.). Over the course of the book, he also covers all the ranks from admiral to landsmen, discipline, punishment, mutiny, and naval engagements. He touches on most, if not all, essential areas of the Royal Navy in the era of Napoleon and Nelson.

While some related topics are somewhat clustered together, others are spread across the volume. For example, the administration of the navy is found in the first few entries, while information about ships and their operation – from different rates, to masts, copper sheathing, and armament – constitute many of the first 40 items. The issue of dock yards, however, is spread throughout the book, as is information on sailor health, food, and mortality. The scattering of related items does beget some repetition of information.

The text does contain some factual errors. After the Battle of the Nile, Glover writes that Nelson recovered from his head wound in Sicily, but his first stop was in Naples with Emma Hamilton for three months before taking Emma and the royal family of Naples to Palermo (10). The author suggests that Nelson's state funeral included "hundreds of river boats" escorting his remains from Greenwich to St Paul's Cathedral (11). While his body was carried along the Thames from Greenwich to the White-

hall Stairs near the Admiralty, it was carried the next morning on an elaborate funeral carriage from the Admiralty to St Paul's in a lengthy procession through the crowded streets of London. He writes about the practice of "starting," where a boatswain or his mate hit a seaman with a short length of rope or stick to move them along faster in their task but does not note that it was forbidden by the Admiralty in 1809 (118-119). Though forbidden, it, in fact, continued, a point of contention for the sailors and the Admiralty. Glover states that when Bermuda's dock yard was completed it provided the West Indies with "first class facilities," yet ships needing major repairs were still sent to Halifax where the harbour was the largest on the North American and West Indies Stations (208).

But these are minor issues and not this reviewer's main concern. What the text lacks is any citation of the source of the information. There are no footnotes or endnotes, or a list of readings from which the information was extracted. There is not even a list of books that a reader of this volume might wish to peruse if interested in learning more about the navy between 1793 and 1815. To really learn about Nelson's navy one must read many other sources, to which this one, unfortunately fails to connect people.

On the other hand, this book is primarily a visual experience. There are a total of 142 images, with five concerning the Battle of Trafalgar, twelve on Nelson himself, and thirty-two involving HMS *Victory*. The rest cover the various topics just noted above. The images are reproduced in high quality on heavy stock resulting in a visually rich book. The author's goal was to give the reader, perhaps viewer would be more appropriate, a sense of the sailor's life experience in their various environments and those which supported the

ships at sea. The images certainly contribute much towards this goal.

Particular images of note include: the cross section of HMS *Victory*'s mast (44, which one is not stated) where we see the use of six different large timbers worked together, with several additional smaller timbers as fill, to constitute the needed diameter of the lower mast. It is very impressive, informative, and an uncommon image. The photographs of the remnants of this age of sail, from HMS Trincomalee in Hartlepool (84, 234), to the prison hulks at Plymouth (230), and those of the last survivors of Nelson's era (291-295) are impressive. Images of the various land facilities and harbours, often written about but seldom depicted. are an important addition (i.e. an aerial view of the Royal Naval Hospital, Great Yarmouth (23); the Royal Naval Academy, Portsmouth, (142); the naval base at Bermuda (207 & 223); and the Admiralty House, Trincomalee, India (245).

The image titled "A contemporary drawing of a 74 and a brig, showing their relative size," (90) is not as clear, being more of an illustration of two very different types of ship. The photograph of the naval gun at Fort Erie, Ontario, is a singularly remote source of a long gun picture, given the number of examples contained on HMS *Victory* alone.

The one major issue with the images is that their sources are not identified. either with the image or in some separate section. As with the text, if a reader (viewer) wanted to know where the original image is held there is no way to find out. Certainly, a good number are Glover's own photographs of the place, or object, but the reproductions of the paintings and many artifacts are most likely not his work. Either way, it is convention to cite the source of the image. I cannot help but think that the museums, art galleries, and historic site managers would want their organization recognized by a credit line or at least an

acknowledgement.

The problem of no citations of factual or pictorial sources renders the book less useful to people seeking to learn about the Royal Navy of the French Revolutionary and Napoleonic period. But they are not really the intended audience. This book is for those wanting just an overview of the subject and era. It is the kind of volume found in museum shops and on public or school library shelves. Someone whose interest in maritime history is beginning to appear might benefit greatly from this book.

Thomas Malcomson Toronto, Ontario

John D. Grainger. *The British Navy in the Caribbean*. Rochester, NY: Boydell & Brewer, www.boydellandbrewer.com, 2021. 279 pp., maps, illustrations, notes, bibliography. UK £75, US \$130.00, cloth; ISBN 978-1-78327-589-2. (E-book available.)

John D. Grainger, an independent scholar and former teacher, is a prolific author with over two dozen books to his credit. He is especially at home in the realms of ancient and maritime history, with titles like *Hellenistic and Roman Naval Wars* (2011), *The Rise of the Seleucid Empire* (2014), and *The British Navy in the Mediterranean* (2017) to his credit. Lucid treatment of the broader strategic background as well as quotidian tactical details distinguish his work, and the prose flows easily.

Not surprisingly, Grainger's latest book, *The British Navy in the Caribbean*, is a solid presentation of a subject heretofore treated as a sideshow to the Royal Navy's better-known activities in the Mediterranean and Atlantic. According to Grainger, Britain's earliest Caribbean ventures were more along the line of informal piratical and pri-

vateering enterprises against Spanish interests than sanctioned government fleets. These included three forays by John Hawkins between 1562 and 1568. Hawkins ferried enslaved Africans into previously inviolate Spanish Caribbean colonies and found ready markets among the labour-starved Spanish planters. During his last voyage in 1568. he and Francis Drake got into a desperate harbour fight at Veracruz and were fortunate to escape with their lives. Despite Hawkins' near ruin, the pattern for future Caribbean scuffles had been set: "Spanish control of the mainland and of the larger islands, including Florida, a position which was to be defended," and English trading/raiding trips and the seizure and settlement of smaller islands ignored by the Spanish (22).

Grainger makes it clear that none of these trading/plundering voyages posed a serious risk to overall Spanish hegemony in the region. Europe remained the focus for both the English and the Spanish royal courts, and the two sides soon informally agreed that Caribbean scrapes should not lead to a broader war. This was an admirable piece of realpolitik, soon codified in the 1604 peace treaty that ended the Armada war. It became known as "no peace beyond the line" (45). The "line" in this case really meant lines, referring to the Tropic of Cancer to the south and the longitudinal line running west of the Azores. Anything south of the Tropic and west of the Azores line was fair game. Since the Tropic of Cancer skims the northern coast of Cuba, this area included the entire Caribbean Sea.

During the early seventeenth century, the English managed to take and settle a number of unoccupied or lightly settled islands, including Barbados, Antigua, Nevis, and Montserrat. Grainger declares that once these islands began producing goods for English markets, their protection and that of the merchant

vessels sailing to and from their habours became "naval problems" (46). Oliver Cromwell employed an aggressive Caribbean strategy with his so-called "Western Design," which contemplated the outright conquest of Spanish territory. Using "no peace beyond the line" as an excuse, he sent 38 ships and 3,000 men into the region. This was by no means a petty privateering adventure and Spain declared war in 1656. The subsequent experience featured the themes of many Caribbean conflicts to follow - command blundering, devastating disease, and mixed military results. Cromwell's fleet failed to topple Santo Domingo, but it did capture Jamaica, which became a "centre of power" (63) for the British, not to mention a wealthy sugar producer.

Henry Morgan is, of course, the most famous Englishman to rampage the Caribbean, but his accomplishments were more those of a pirate than a navy man. Morgan enjoyed spectacular success, but his buccaneer armies were risky instruments of national policy. As Grainger writes, pirates "had their own aims and agendas, and could not be trusted" (71). Given the potential profits, it was hardly a surprise that Morgan's freewheeling ways appealed to later Royal Navy officers. Throughout Britain's Caribbean history these men resisted cooperative enterprises and were interested only in enriching themselves.

By 1729, the English Caribbean enterprise had finally evolved from scenes of buccaneering derring-do to a formal naval presence. The fleets were small compared to those back home – a force under Rear Admiral Charles Stewart consisted of only eight ships, "the largest a third rate" (134). At first, this was generally adequate for limited operations and chasing smugglers, but the eighteenth century brought a series of wars, including Jenkin's Ear, the Seven Years' War, the American Revolution, and the Napoleonic Wars, in which naval manoeuvering and combat between rival powers were very nearly worldwide. This meant diverse and complicated strategic goals. Perhaps Britain's most impressive success was the capture of Havana after a long siege in 1762. Spain regained the "Key to the Indies" after an 11-month British occupation. Less impressive was the Royal Navy's inability to stamp out smuggling and privateering during the American war. After Britain's loss of Pensacola in 1781, the French navy was free to concentrate against Yorktown, directly leading to the overall British defeat. Grainger treats the nineteenth and twentieth centuries briefly, especially after the First World War when the Caribbean became an American lake.

There is much to admire in Grainger's narrative. His inclusion of the Gulf of Mexico and its northern littoral, something too few Caribbean scholars bother to do, is particularly pleasing, as is his explanation of technological improvements like coppering and carronades. At 252 pages of text, his book provides an admirable and fast-paced overview of a fascinating subject.

John S. Sledge Fairhope, Alabama

John Grehan and Alexander Nicoll. *Saipan 1944: The Most Decisive Battle of the Pacific War*. Barnsley, S. Yorks: Frontline Books, www.frontlinebooks. com, Images of War Series, 2021. 191 pp., illustrations, maps, notes, bibliography. UK £14.99, US \$22.95, paper; ISBN 978-1-52675-830-9.

Although a select few of major Second World War actions – Guadalcanal, Iwo Jima, and Okinawa – enjoy wide recognition over seventy years after the end of the war, that is unfortunately not the case with dozens of other battles that took place across the broad expanse of the Pacific. Many of these campaigns remain virtually unknown outside of a narrow pool of academic specialists and avocational history enthusiasts.

With the release of *Saipan 1944*, authors Grehan and Nicoll have written an introductory history to one of the Pacific Theatre's most pivotal engagements and made it available to a wider audience.

By the summer of 1944, the Japanese empire, once the dominant military power of the Far East, was on its heels in a wide arc across the Pacific. US Army forces under the command of General Douglas MacArthur were threatening Japanese possession in the Philippines. At the same time, the 1st Marine Division secured the island of Peleliu after a bloody, two-month struggle.

For the Americans, perhaps the greatest prize of 1944 was the Mariana Islands: Guam, Saipan, and Tinian. The Marianas constituted a key steppingstone for Army Air Forces tasked with the reduction of the Japanese home islands. Situated just 1,500 miles from Tokyo, the Marianas offered ideal airfields for the most fearsome bomber in the American air fleet: the B-29 Superfortress.

The task of actually subduing the Marianas fell to the warriors of the United States Marine Corps, who had been honing their skills in amphibious operations over the preceding two years. The campaign for the Mariana and Palau Islands, codenamed Operation Forager, began to unfold on 15 June 1944, when Marine landings were carried out on Saipan, the most heavily defended island in the Marianas.

During a horrific three weeks of combat, the 2nd and 4th Marine Divisions, bolstered by the Army's 27th Infantry Division, struggled against 30,000 Japanese troops who put up a characteristically dogged defense. For

the Americans, who possessed a decided advantage in men and materiel, the battle was, nonetheless, a costly affair. By the time the Americans secured Saipan on 9 July, they had suffered over 13,000 overall casualties. Japanese troops, who rarely surrendered on the battlefield, endured a worse fate: some 24,000 Japanese military personnel perished during the fighting.

The campaign likewise witnessed the crippling of Japan's Imperial Navy. In a swirling air and naval battle in the Philippine Sea on 19-20 June, Japan's 1st Mobile Fleet was largely wrecked by American carrier-based aircraft. The Japanese suffered irreplaceable losses: three fleet carriers were sunk and over 600 aircraft were shot down during a lopsided engagement which exultant American fliers nicknamed the "Great Marianas Turkey Shoot."

With Saipan firmly in American hands, Guam and Tinian were seized following amphibious landings in July 1944. The success of the American campaign ensured that the Marianas would serve as an ideal base for the Americans to take the war directly to Japan.

In the wake of the battle for Saipan, the results of the American victory irrevocably altered the strategic balance of power in the Pacific. With her fleet all but destroyed subsequent to the Battle of the Philippine Sea, the Imperial Japanese Navy found itself helpless to halt further American gains.

Saipan 1944 is the latest offering from the Images of War series from Frontline Books, an imprint of Pen and Sword, one of the world's most prolific publishers of military history books. As the series title indicates, this volume is heavily illustrated with black and white photographs taken during the Second World War. Coming in at 190 pages in total, there is a shortage of text, although the book does give the reader a good introduction to Operation Forager

and the epic fight for Saipan.

Along with offering a good grasp of Saipan's grand strategy, the authors thoughtfully included accounts from the common soldiers who were actually on the ground. The text includes captivating vignettes that highlight the sacrifices of men who were posthumously awarded the Medal of Honor after sacrificing their lives for their fellow Marines.

By pairing such sobering accounts with period photography, *Saipan 1944* offers a brief but unvarnished glimpse at the horrors of combat in the Pacific Theatre.

Joshua Shepherd Union City, Indiana

Edward Hampshire. *The Falklands Naval Campaign 1982: War in the South Atlantic*. Oxford, UK: Osprey Publishing, www.ospreypublishing.com, 2021. 96 pp., illustrations, maps, tables, bibliography, index. UK £15.99, US \$24.00, CDN \$32.50, paper; ISBN 978-1-4728-4301-2.

This work is the 361st entry in Osprey's Campaign Series and the author's sixth Cold War-era contribution to Osprey's catalogue. British naval historian Hampshire offers a compact vet comprehensive coverage of the naval aspects of the Falklands War from the initial Argentine moves on South Georgia on 18 March 1982 to their surrender on 14 June of that year. As is the style of the Campaign Series, there is a brief summary of the war's origins, followed by a short chronology, a discussion of opposing commanders, forces, and operational plans, then an examination of the war itself. The book concludes with an analytical discussion of the war's aftermath and an accounting of present-day memorials to the battles. Maps, period images in both black and white and colour, paintings, and tables are

used throughout the text for added visualization and quick reference, with a short index and bibliography at the end to complete the work.

Hampshire's three-page examination into the origins of the Falklands War succinctly covers the 1690 to 1933 history of the small island chain. along with increased Argentinian pressure over ownership which came to the forefront in the 1960s and 1970s. He touches upon the country's anti-communist "Dirty War" era, and the need for Argentina's military junta to find a galvanizing "act of audacious nationalism" to secure their wavering position as part of the lead-in to the one-page chronology and examination of the opposing commands (6). He covers both British and Argentinian forces in detail, devoting three pages to the commanders and command structure, photographs of key leaders, background information on commanders' combat experience, and charts of the two command hierarchies. Force disposition for both sides follows, with tables of available vessels and aircraft paired with text relating information on force equipment, readiness, and advantages, such as Britain's invaluable Ships Taken Up From Trade (STUFT) requisitioning plan for Cold War era crisis actions (12).

An account of the campaign naturally takes up the bulk of the work, although the relatively limited length of the conflict allows for more details within the space constraints of the Campaign series. Hampshire does an admirable job of maintaining a human element in the discussion, naming the Argentinian pilots involved in various attack runs on British ships, contextualizing the casualties of General Belgrano's loss with descriptions of how the men were gathered below in the mess decks, and detailing sacrifices made aboard British vessels as they were hit, such as engineer Paul Henry passing his respirator

to a junior officer to allow the other man to escape in his place (83). The unprepared nature of the Argentinian forces in the face of a large-scale, armed British response is quite evident, as are the deficiencies of the Type 42 destroyers' radar systems against low aircraft and missiles and the attempts to overcome this with the "42/22 Combo" pairing of the two different ship types and their respective defensive systems (47). The fact that Britain was able to field a carrier and maintain a Close Air Patrol of Sidewinder-armed Harrier Jump Jets was clearly a key deterrent to some of Argentina's aerial attack efforts.

Hampshire's "Aftermath" section does an excellent job of highlighting the war's rippling effects, from the fall of the Argentine junta to the invigoration of the Royal Navy, the Falkland Islanders, and the British people as a whole. Most importantly, he notes that the campaign "demonstrated the importance of sea power in unexpected crises where ... land and air bases were unavailable" while at the same time highlighting the dangers of inadequately protected vessels on the modern battlefield and the need for flexibility and adaptability when unforeseen threats challenge military planning (92).

The inclusion of direct citation such as endnotes would help with referencing, but the lack of these is a common feature of the Osprey format. Given the post-Falklands War politicization of the sinking of the cruiser General Belgrano as a "war crime" in Argentina, it might be prudent to add a note that the Argentinian Navy considers the loss of their own vessel as having been a legitimate act of war. Finally, in the Battlefield Today section, it might be worth mentioning the final disposition of surviving ships and aircraft. For instance, Falklands veteran HMS Bristol has recently been put up for disposal in England despite calls for her conversion into a

museum, and all four Vulcan bombers mentioned in the early attack phases were preserved in England after decommissioning. These are minor suggestions, however, and are meant only for possible future revisions. In fact, The Falklands Naval Campaign is a solid introductory text into both the Royal Navy's and Argentina's actions leading up to and during the conflict. Hampshire's knowledge of the Cold War British navy and excellent research offers a detailed yet succinct accounting of the nearlythree-month conflict as seen by sailors and airmen both in and around the Falkland Islands Total Exclusion Zone. With equal coverage of both Argentinian and British forces presented down to individuals in engagements, Hampshire offers a well-rounded and impartial view into an extremely contentious piece of modern naval history.-

Charles Ross Patterson II Yorktown, Virginia

Chris Henry. Depth Charge: Royal Naval Mines, Depth Charges & Underwater Weapons, 1914–1945. Barnsley, S. Yorks: Pen & Sword, www.pen-andsword.org, 20121. 197 pp., illustrations, notes, appendices, bibliography, index. US \$29.95, paper; ISBN 978-1-52679-643-1.

The first workable submarine, *Turtle*, appeared during the American Revolutionary War but failed to sink a ship. The first submersible to successfully attack and destroy an enemy vessel – USS *Housatonic* off Charleston, South Carolina – was CSS *H.L. Hunley* during the American Civil War. Ironically, *Hunley* was likely sunk from the concussive explosion of the implanted mine, an unintended suicide-by-depth-charge. During the dawn of the twentieth century, submarines were largely considered defensive deterrents useful in attack-

ing ships not far from shore, especially around harbours. In the loosely chival-rous rules of naval warfare, these vessels were considered ungentlemanly. By a noble warrior's agreement, they were required to surface and aid in the rescue of surviving seamen from the stricken ship attacked. This policy did not last long. During the First World War, Germany successfully turned U-boats with their torpedoes and deck guns into potent offensive weapons. The sinking of the battleship HMS *Audacious* spurred the development of countermeasures to staunch their lethality.

Chris Henry's book is concerned with the development of a considerable array of underwater devices largely developed in Great Britain at HMS Vernon. This nineteenth-century Royal Navy shore establishment (affectionately known as a "stone frigate") located in Portsmouth, also served as the royal torpedo school. A second base, established during the Second World War, was known as *Vernon* M. Depth charges devised at this facility could destroy the submerged enemy or psychologically impact submarine crews forcing the vessel to surface and face destruction by conventional gunfire.

Henry focuses his character-driven chronicle on the inventive genius of Herbert J. Taylor and, to a lesser extent, Alban L. Gwynne. The author describes the physics, chemistry, and mechanical engineering that went into building a multitude of functional weapon systems. The first devices used TNT as the explosive. Later, more sophisticated pyrotechnics were developed that required an initiator, intermediator, amplifier, accelerator, and intensifier to detonate. Depth charges consisted of four parts: an explosive charge, the so-called "pistol," a casing, and a safety primer. The key to most subsequent schemes was creating reliable hydrostatic "pistol" designs. These had to be sensitive to specific ocean-depth pressures in order to detonate at or near an enemy submarine. The depth charge deliverers also had to devise propulsion mechanisms to fire the depth charges in deadly effective patterns, but explode well away from the firing vessel. They invented rail systems, miniature howitzers, so-called "Y-guns" and "hedgehog" forward-throwing anti-submarine devices among a host of variations. Ordinance-delivering vessels were obviously vulnerable to underwater concussions. As submarines became more sophisticated, it became a game of move/countermove, a perpetual escalation of undersea battle stratagems. The most effective innovation was the invention of the ASDIC oscillator (Anti-Submarine Detection Investigation Committee) using soundwave echoes and hydrophones to detect the whereabouts and course of their stealthy prev.

Other measures were also employed to defend against submarine attacks, including passive submarine nets and trawlers towing gargantuan, thick wire nets on the order of magnitude of 16 miles long. A variety of mines were used for various tactics and were either drifted or were moored to the sea bed. There were also aircraft-laid mines and depth charges that were detonated by contact with projections, antennae, wave motion, as well as acoustical or magnetic disturbances. A section of the book briefly describes mine detection, using mostly wooden vessels to sweep for mines. Unsweepable magnetic devices, variations on limpet mines, were placed directly on hulls below the waterline by frogmen or miniature subs. The book is replete with model updates but lacks information concerning their advances or needs.

Henry discusses the contributions of British allies as well as their enemies in this destructive cat and mouse wargame, but the emphasis is on the Royal Navy's contribution to the research and development of these devices. The remarkably successful British team of inventors were mostly independent contractors, some of whom profited financially from their inventions during the nation's war effort through two wars. In addition, there is a chapter titled "Prima Donnas, Crackpots and Misfits," where the author discusses the contribution of "a whole host of unusual characters who would not have fitted into a purely military background". . but "were engaging able people" (146).

This highly focused work suffers from several flaws. The author often introduces or uses technical jargon before giving its definition, which usually occurs later in the segment, sometimes in subsequent chapters or not at all. There are also photos or lists of model upgrades with little or no information about them. Among the abundant illustrations, those dealing with technical items are of marginal quality, others are difficult to read and follow, while some do not appear near the text that refers to them. Still, there is much to be learned about this important topic dealing with the history of defense issues related to submarine warfare. As stated in the first page of the book's introduction: "It is not meant to be an exhaustive account of every weapon, but rather an explanation of some of the weapons, linked to the stories of some of the men who invented them." With that in mind, Depth Charge is a good literary gateway for delving deeper into this often-arcane maritime history topic.

Louis Arthur Norton West Simsbury, Connecticut

David Hobbs. *Taranto: And Naval Air Warfare in the Mediterranean, 1940-1945*. Barnsley, S. Yorks: Seaforth Publishing, www.seaforthpublishing.com, 2020. xiv+440 pp., illustrations, maps, notes, appendices, bibliography, index.

UK £35.00, US \$52.95, cloth. ISBN 978-1-5267-9383-6. (E-book available)

David Hobbs is a man on a mission. After a career in the Royal Navy and a decade serving as the curator of the Fleet Air Arm (FAA) Museum at RNAS Yeovilton, he has dedicated himself to chronicling the history of British naval air operations in a series of works. Starting with a book on the British Pacific Fleet (The British Pacific Fleet, 2011), he went on to write one about the postwar history of the FAA (The British Carrier Strike Fleet After 1945, 2015) before going back to the origins of British naval aviation in the First World War (The Royal Navy's Air Service in the Great War, 2017), after which he recounted the events of the interwar era and the early months of the Second World War through the experiences of an FAA pilot (The Dawn of Carrier Strike, and the World of Lieutenant W P Lucy, 2019).

Hobbs' latest volume represents a continuation of this effort, focusing on FAA's role in the Mediterranean theatre during the conflict. Readers of his previous books will find much that is familiar in it, as he provides another detailed operational history supplemented with a considerable selection of photographs, most of which are from the author's personal collection. Just as familiar is his admiration for the men who served in the FAA, as well as his lament for the opportunities lost because of prewar decisions that handicapped the senior service's aeronautical capabilities.

This comes across in his description of the origins of Operation Judgment, the airstrike against the Italian battleships anchored in Taranto harbour. Hobbs tracks its genesis to the efforts to perfect airplane-deployed torpedoes in the First World War, one that, but for the Armistice, would have culminated in an airborne attack on the German High

Seas Fleet at Kiel. The potential of the carrier-borne torpedo strike remained at the forefront of FAA planning during the interwar period and attempts by the Royal Air Force to attack German warships at the start of the Second World War provided more lessons that would prove valuable. Hobbs sees the attack on the French battleship Richelieu at Dakar on 8 July 1940 by torpedo-armed Swordfish biplanes as exerting the single greatest influence on Taranto strike planning, as it demonstrated the need for lower torpedo depth and speed settings than were used with torpedo attacks at sea.

When the Taranto attack was launched three months later, it was as part of Operation MB 8, a series of naval deployments taking place simultaneously throughout the Mediterranean. That the airstrike stands out is a testament to the operation's success, with three battleships disabled and three other warships damaged. While acknowledging that the number of planes – amounting to fifteen percent of the frontline Swordfish force in the entire Royal Navy - committed to the strike represented a significant allocation of force. Hobbs is nevertheless critical about the use of just one of the three aircraft carriers available in the region for the attack. For him, the failure to employ Eagle and Ark Royal was a missed opportunity that reflected the outdated thinking of Andrew Cunningham, the commander-in-chief of the Mediterranean Fleet, who until that point viewed planes as adjuncts to the battle fleet rather than a powerful weapon in their own right.

The success of the Taranto attack changed this. By this point in the war, the Royal Navy was employing their aircraft carriers in the region on a variety of missions, from airstrikes on targets in Italy to ferrying aircraft to Malta. Their utility in these roles was constrained by several factors, from the

small size of their deck elevators to the limited capabilities of the navy's carrier-capable aircraft. Fortunately for the FAA, the poor coordination between the Italian Navy and its air force (which often failed to provide air cover for naval units engaged with British forces) usually ensured that the FAA's inferior planes enjoyed air superiority by default.

By the end of 1942, the FAA was given a new mission: supporting the amphibious landings in North Africa. Despite the formidable learning curve they faced, the FAA soon established itself in the role that would increasingly characterize its operations over its final two years of activity in the region, thanks to the use of new aircraft models (particularly American-built planes that were designed for carrier use) and the influx of smaller escort carriers. Above all else, though, it was a testament to the adaptability of the men of the FAA, for whom this was merely another of the challenges they overcame in order to win their war.

It is this empathy for the men of the FAA which is the real hallmark of Hobbs' work. His book is as much a tribute to them as it is a history of FAA activities in the Mediterranean. This compliments rather than detracts from his coverage of British naval air operations, as it provides the emotion underlying his solid and well-researched study. Not only has Hobbs advanced his efforts to chronicle the history of the Royal Navy's air arm one step closer to completion, he has provided an essential work for anyone interested in the naval air war in the Mediterranean and naval operations in the theatre more generally.

Mark Klobas Phoenix, Arizona

Richard J. King. *Ahab's Rolling Sea: A Natural History of Moby Dick*. Chicago: University of Chicago Press, www.

press.uchicago.edu, 2019. 464 pp., illustrations, maps, notes, bibliography, index. US \$30.00, cloth; ISBN 13:978-0-226-51496-3. (E-book available.)

Of the many people who have written about Herman Melville's Moby Dick. few own two decades sea experience aboard bona fide square riggers. Such a one is Richard J. King, visiting professor of maritime literature and history at the Sea Education Association in Woods Hole, MA. During the course of his fascinating career, King has cruised the Pacific Ocean on board three-masted barques, earned a doctorate at the University of St. Andrews, illustrated children's books, sailed the Atlantic alone in a 28-foot sloop, and written a regular column for Sea History magazine. When he declares, as he does in his latest book, that, "Tacking a big ship with three masts and more than a dozen potential sails is an operation requiring a lot of people hauling and easing lines in order, especially with sails suspended from heavy horizontal yards that must be shifted from one angle to another with some precision" (94), the reader is compelled to sit up straight and attend.

Given his credentials, King is uniquely qualified to evaluate Melville as natural philosopher, sailor, and writer. Overall, he gives the bearded novelist high marks, especially considering the state of oceanic science and environmental sensitivity in Melville's era. Most Americans then regarded the sea as something to be traversed or exploited. Few people troubled themselves with thoughts of overfishing or waste. But sitting in his clapboard Berkshires house, alternately scribbling away at his epic and contemplating the green hills outside his window. Melville came to a deeper appreciation. He remembered his long voyages and understood, King writes, "that the sea drives our climate, our biodiversity, our economy, our international politics, and our imaginations" (2). Like the character Pip, bobbing in the Pacific's immensity, Melville "saw God's foot upon the treadle of the loom, and spoke it" (220).

King structures his book like Melville did Moby Dick, alternating between first-person episodes and natural history, with an emphasis on cetology. King's personal insights are easily his book's highlights. These include describing what it feels like to spy a whale spout from the gently swaying crosstree of a square rigger and quizzing a scientist beside a giant stainless-steel tank containing a squid carcass reeking of alcohol. In the natural history realm, he includes chapters on phosphorescence, brit and baleen, barnacles, sharks, and, like Melville, every bit of the whale from its skeleton to its skin. Not infrequently, cetology and the personal intersect, as when King explains ambergris. This waxy substance is produced in the digestive tracts of sperm whales and has always been highly valued by perfumers as a fixative. In *Moby Dick*, Melville has the character Stubb scoop handfuls of it from a rancid whale carcass, "worth a gold guinea an ounce to any druggist" (215). Today a pound of it can fetch \$15,000. King contemplates a sample of this pricey stuff "in the tank room at the Natural History Museum in London" and testifies that it "smells, well, like it came out of a whale's ass" (217).

King also studies whale behaviour, especially whether or not the aggressive tendencies that Melville described so vividly in his novel – flipping boats, snapping off human limbs, and ramming ships – are credible in the real world. "Most of these behaviours are the actions of what seems to be only a literary, foaming leviathan that's whipped up for the drama of the fictional climax," he declares. "Yet, as ever, these animal behaviours are all far less fictionalized when you examine them carefully"

(314). This King does, of course. His examples include a nineteenth-century sailor's description of a sperm whale chomping into a boat and "making a hole as big as the head of a barrel," (316) as well as female whales fending off killer whales with their jaws. Melville was aware of such incidents, including the loss of the whaler *Essex*, rammed and sunk by a whale in 1820. According to King, modern scientists doubt "any intentionality or malice in these animals," (322) but nineteenth-century whale men thrashing about in the debris of their smashed boats likely felt differently.

Running throughout King's book is an environmental cri de coeur. He credits Melville with a "brotherly, proto-ecological, proto-environmentalist eye for interdependency that was far ahead of its time" (330). Unfortunately, the oceans and sea life are considerably more stressed now than 170 years ago. To begin with, climate change has raised the Pacific an estimated eight inches since then. On the positive side, commercial whaling is nearly a thing of the past, and Americans consider the animal an "icon of conservation" (341). But overfishing of other species is still an issue. King quotes a 2003 study that found a 90 percent reduction in predatory fish worldwide since Melville's time. That includes sharks, the fins of which are a prized Asian culinary delicacy. Given Melville's grasp of the interconnectedness of things, King convincingly argues that Moby Dick may be read as a moral tale in which "messing with the forces of the natural ocean world will end poorly for humans" (350).

Ahab's Rolling Sea is a refreshing and substantive contribution to the existing mountain of Melville research. It avoids convoluted literary analysis and outrageous symbolic claims, instead focusing the reader's attention on the sea, where Melville intended it to be. Not the least of its many pleasures is the irresist-

ible urge to once again plunge into that classic book that so memorably begins, "Call me Ishmael."

John S. Sledge Fairhope, Alabama

James M. Langdon. *Great Lakes Chronicle: Essays on Coastal Wisconsin*. Madison, WI: Wisconsin Historical Society Press, www.shop.wisconsinhistory.org, 428 pp., illustrations, author index. US \$24.95, paper; ISBN 978-0-87020-919-2.

Great Lakes life and management encompasses a variety of disciplines: environmental, economic, and others. *Great Lakes Chronicle: Essays on Coastal Wisconsin* is a collection of essays related to Wisconsin's Lakes Michigan and Huron and Green Bay shorelines published annually from 2002 to 2018 on topics such as economic development, community planning, transportation, recreation, and stewardship. Its 121 essays are written by public officials, business and community leaders, and scientists and deal with some aspect of coastal Wisconsin.

Each year's collection begins with a forward by the Governor at the time, followed by seven to nine essays, mostly three pages each. Their wide variety of topics are sure to contain something attractive to most readers of *The North*ern Mariner. They deal with coastal and water management and wetlands. fisheries management, harbour and bay development and redevelopment in the wake of industrial changes, population trends, tourism, shipbuilding, wilderness protection and restoration, beaches, and rights of, and interaction with, Indigenous nations, just to give a sampling. They provide a catalogue of challenges confronting the stakeholders in Wisconsin's Great Lakes coastlines and

their initiatives in response.

Though a thick book, it is a fairly easy read. The index of authors is helpful. There is no general index or bibliography but, given the composition of the book, they are little missed. Issues changed over the years of publications as problems associated with low water levels were replaced by those of high levels. Depending on your interests, some essays will be fascinating while others can be skimmed over. Each reader will pick those that most appeal. The Lake Michigan shore up to Door County is the region of Wisconsin with which I am most familiar. I enjoyed reading about places that I have visited, such as historic Port Washington, the Ports of Sturgeon Bay and Manitowoc and Washington Island's unique way of life. One essay that I found to be fascinating is "The Niagara Escarpment: A Unique Wisconsin Coastal Resource." The escarpment, that rocky rim of an ancient sea stretching from Door County, Wisconsin through Michigan, Ontario, and New York, including Niagara Falls, is a powerful reminder that the world has not always been as we see it now. For others, the Lake Superior shore or some industry, or environmental challenge will captivate your attention. Even if another Great Lake is your favorite, they share many experiences. I recommend Great Lakes Chronicle for anyone for whom waters, Wisconsin, or the Great Lakes are important parts of their world.

Jim Gallen St. Louis, Missouri

Margaret E. Leshikar-Denton. *Cayman's 1794 Wreck of the Ten Sail. Peace, War and Peril in the Caribbean.* Tuscaloosa, AB: The University of Alabama Press, www.uapress.ua.edu, 2019. xix+289 pp., illustrations, maps, appendices, notes, bibliography, index. US \$64.95, cloth; ISBN 978-0-8173-2045-4. (E-book available.)

The eastern, windward, shore of Grand Cayman Island is a graveyard of wrecked ships, the victims of the treacherous waters which conceal the numerous scattered reefs found up to a mile from land. The most significant singular wrecking event in the history of this ill-fated shore is that of nine British merchantmen and their frigate escort, HMS Convert, in the early hours of 8 February 1794. Convert (originally the French frigate L'Inconstante) and its full convoy of 58 merchantmen bound for various ports in Great Britain, represented the widespread nature of warfare between the major European powers at the time. In particular, the duality of naval ships acting as both aggressors of the enemy, and protectors of allied maritime interests, operating across the vastness of the world's oceans. Further, the wreck demonstrates most fruitfully, that while the Cayman Islands themselves were relatively lightly inhabited, their location within the Caribbean ensured their ongoing importance to regional and international history. It is these complex webs of local, regional, and international history that Leshikar-Denton seeks to weave together to place the wreck of the Ten Sail into its full context.

To provide the foundation for her analysis, Leshikar-Denton devotes her initial chapter to modern-day Cayman Islander oral histories relating to the wreck. Through these, she contends that while the exact details of the wreck and its aftermath have largely become distorted, the colourful nature of the stories themselves is significant. While the stories have modified history from the supposed hard facts that historians prefer to work with, they have also become cultural touchstones that the people of Grand Cayman Island have incorporated into their ongoing oral tradition. In this manner, the Wreck of the Ten Sail survived roughly 150 years of being largely forgotten by the European world, before it would help to spawn modern

nautical and maritime archeology in the Cayman Islands in 1979. The second chapter helps contextualize the place of the Cayman Islands in regional and European history. Here Leshikar-Denton demonstrates that the islands were heavily overshadowed by their agriculturally richer Caribbean neighbours in the British Empire, and yet still benefitted from existing along key shipping routes in the region. As conflicts grew, particularly between France and England, the British holdings saw increased communication and commerce with their mother state. The quasi-backwater Caymans also saw these increases and came to be seen as holding some value – though not the indispensability of other colonies in the region. More importantly, they were being drawn more tightly into the web of global empires.

The core five chapters turn their gaze onto the Convert herself seeking first to put her into the context of naval warfare at the time that she was launched in 1790. Ships the size of *Con*vert/L'Inconstante were by this time coming to be increasingly outclassed and outgunned, as the focus in naval warfare was on maximizing the size and number of cannons to the overall maneuverability of the ship itself. Thus, the ship was primarily expected to act in roles where speed was most desirable, particularly, as Leshikar-Denton indicates, because based on modern archeological surveys its armament was about a third below where it likely should have been. The Revolutionary French government would deploy L'Inconstante in 1792 to Saint-Domingue, and it would be during this duty that late in 1793 the British seized the ship, renamed it Convert, and assigned it convoy duties. Leshikar-Denton provides detailed descriptions of both the British and French versions of the seizing of the ship to demonstrate how contentious the practice of capturing prize ships could be in this period.

In her final chapter, the author lays out a detailed discussion of the history of modern surveys of the wreck site, beginning with the work of Roger Smith and Texas A&M's Institute of Nautical Archaeology in 1979 and 1980. This was followed by Indiana University's Charlie Beeker in the mid-1980s and the work of the author herself in the 1990s. In discussing these efforts, she makes it clear that while knowledge on the wrecks and their story has grown with better techniques and technology, there is still much to be learned. In many ways, this final argument encapsulates the purpose of the book. The wreck was forgotten by the larger world for over a century and a half, and its full historical place has yet to be established; the more that is learned about it, the greater the benefit to both the local and international communities.

As director of the Cayman Islands National Museum and a historian who has worked on the wreck for thirty-some years, Leshikar-Denton is uniquely positioned to bring the story further into contemporary maritime historical thought. More importantly, she has provided a text that can easily be used for multiple educational purposes. Whether focusing on the importance of maritime archeology in advancing maritime history, the techniques for properly documenting, interpreting, and contextualizing an underwater site, or simply discussing often overlooked components of imperial wars, this book is most applicable. While the Caymans may have often been overshadowed by their sugar-island cousins, this book surely will help to ensure that their importance of place in maritime history does not continue to suffer the same fate.

Michael Toth Fort Worth, Texas John T. Mason Jr. *The Pacific War Remembered: An Oral History Collection.* Annapolis, MD: U.S. Naval Institute Press, www.usni.org, 2019. xix+373 pp., illustrations, maps, appendix, bibliography, index. US \$34.95, cloth; ISBN 978-0-87021-522-3. (Originally published 1986.)

Every naval officer should read this book. *The Pacific War Remembered* is a collection of oral histories from US Navy protagonists in the Pacific theatre of the Second World War. First published in 1986, it is easy to see why the Naval Institute Press saw fit to reissue it now. It enriches our historical memory of the war against Imperial Japan while imparting a personal touch. At the same time, it abounds with insights into our age of renewed great-power strategic competition in the Pacific. These are personal remembrances that feel ripped from the headlines.

Transcendentalist philosopher Ralph Waldo Emerson declared that "there is properly no history; only biography." In other words, history is the sum of the individual biographies of the people – the quick and the dead – who comprise humanity. *The Pacific War Remembered* adds to that sum by bringing in voices seldom afforded prominent billing in the history books.

Firstly, historians have a hard time writing about junior officers and enlisted folk. Official histories tend to record what high-ranking officers do in wartime. Their words and deeds are matters of public record and they often write memoirs. People occupying the lower echelons toil away in obscurity for the most part, meaning there are fewer archives to consult when researching them. They have to do something splashy to merit mention in the histories. By contrast, this collection includes accounts from enlisted sailors alongside those from captains and ad-

mirals. It also pays attention to the experiences of junior officers — albeit junior officers who achieved high rank by the time they were interviewed for this work. The book thus helps correct our tunnel vision vis-à-vis the deeds of the good and great.

Second, editor John T. Mason Jr. goes out of his way to amplify voices from beyond the US Navy's glamour communities. It is natural for writers to accentuate the feats of carrier pilots, destroyer sailors, or submariners. They do battle with the enemy. Their stories exude human drama and sell books. Battle stories have their place in historical accounts and are present here. For example, aviator Admiral John S. "Jimmy" Thach recalls how, as a junior officer before the war, he sat at his kitchen table, night after night, devising his "weave" tactic for air combat. The Thach weave helped pairs of US fighter planes work together to offset nimble, fleet-of-foot Japanese Zeros that flew against them. US fighter squadrons deployed the weave to good effect at the Battle of Midway – hence its enduring fame. Thach goes on to describe the death of his ship, the aircraft carrier Yorktown, during the battle's waning stages. This makes compelling and important reading.

Even more compelling, though – for this reader, anyhow – are testimonials from the supporting arms that made it possible for battle forces to achieve victory at sea. Navies can accomplish little without lavish logistical support and infrastructure, much of it improvised. For instance, Captain Willard G. Triest reminisces on his experience as a Naval Construction Force (soon to become known as the Seabees) officer during Operation Bobcat, a base-building project early in the Second World War. Then a lieutenant, Triest was stationed at Ouonset Point in Rhode Island. He recalls how, on New Year's Eve 1941, he was assigned to design and construct

a "supersecret" base on Christmas Island, around 1,000 nautical miles south of Hawaii. The base would furnish Australia-bound shipping its first stepping-stone across the Pacific Ocean.

Outfitting the base involved erecting infrastructure to support 5,000 army troops and refuel ships headed down under. This might sound like workaday routine for any construction corps given that such bodies exist to build things. But the timeline was daunting. Triest exclaims that all design work had to be done "and the equipment accumulated about twenty thousand tons of it-and loaded on two ships in Quonset Point in two weeks—I repeat in two weeks!" An old German map and a movie that happened to feature the site for the facility were their guides to Christmas Island terrain. The navy lacked expertise on pipelines and tank farms, so project overseers hurriedly reached out to private industry to recruit officer and enlisted specialists. With diligent effort and timely help from higher-ups – Chief of Naval Operations Admiral Ernest King helped the Seabees override bothersome rules and regulations – freighters laden with builders and hardware steamed off for the Pacific by the deadline.

Triest's account sets the tone for chapters on such topics as how navy underwater demolition teams prepared beaches for US Marine Corps amphibious assaults on island strongholds like Saipan, Tinian, and Okinawa. Salvage officer Rear Admiral William A. Sullivan recounts clearing Manila Harbour of sunken ships and debris strewn about by retreating Japanese occupiers to impede efforts to return the shipping hub to service. There is even an amusing tale from a maintenance officer assigned to drydock the battleship *Iowa* for shafting work at short notice. *Iowa's* skipper, evidently a cowboy of a shiphandler, pulled into the dock too fast, backed down hard and disturbed the blocks emplaced below to support the battlewagon's hull once the water drained out. What is a maintenance superintendent to do?

Fleet designers obsess over funding and constructing fighting ships, aircraft, and armaments. Emerson would approve of *The Pacific War Remembered* as history – but this treatise reminds posterity that there is far more to naval warfare than battle. Neglect mundane-seeming capabilities at your peril.

James R. Holmes Newport, Rhode Island

Stephen L. Moore. Rain of Steel: Mitscher's Task Force 58, Ugaki's Thunder Gods, and the Kamikaze War off Okinawa. Annapolis, MD: U.S. Naval Institute Press, www.ussnip.org, 2020. 456 pp., illustrations, notes, glossary, appendix, bibliography, index. US \$39.95, cloth; ISBN 978-1-68247-526-3. (E-book reviewed.)

In his book *Rain of Steel*, Stephen L. Moore follows the exploits of Task Force 58 during the last year of the Second World War. While focusing on the kamikaze campaign off Okinawa, he also examines raids on shipping and the destruction of the last remaining elements of the Imperial Japanese Navy. He hits all the high points well known to most students of the period: the attacks on radar picket stations off Okinawa, the tremendous damage done to USS Franklin, USS Laffey, and the search for and sinking of Yamato, and its escorts. He examines the campaign against the kamikaze threat from multiple angles, including the efforts to build, and coordinate effective fighter screens and tactics, as well as the need to attack airfields around Japan, in order to catch planes before they could attack.

For casual students of the events of the last year of the Second World War in the Pacific, this book serves as an excellent introduction to the naval aspects of the Okinawa campaign. Drawing on extensive first-hand accounts and interviews, much of the book reads like a personal account of events, without being a blow-by-blow account of events. The narrative style of the author, while it may be disconcerting for those looking for a technical analysis of the events, gradually draws the reader in and provides a feeling of what it was like to be in the cockpit of a fighter, chasing a pilot intent on suicide. Rather than addressing the efforts of the entire American fleet, Moore focuses on a single fighter group, only occasionally exploring the actions of other units. With so much going on during the campaign, this singular focus allows readers to identify with a smaller, more relatable group, rather than getting lost in the vast campaign. For readers interested in narrative histories of military conflict, this could prove far more appealing than a more technical analysis. For students interested in more abstract concepts, the book also tackles the question of what does a carrier group do when there are no more enemy ships to sink? Also included are tables of aircraft kill totals. and a glossary of aviation terms and aircraft identification, for readers who may not be familiar with them, making the work far more accessible to those looking for an entry point on the subject.

Readers looking for a detailed analysis of the Japanese side of the campaign may want to look elsewhere. While Japanese sources are referenced throughout the book, there is a definite and intentional American bias. The author does provide Japanese sources for those who want to explore that side of the campaign further. Intentionally or not, Moore tackles one of the larger preconceptions of the Okinawa campaign. While suffering from a lack of experienced pilots at this stage of the war, Japan still possessed both experienced

pilots and effective aircraft at the end of the conflict. Moore indicates that losses were considerable on both sides.

On a minor technical note, the book was reviewed from a PDF file. Readers transferring the file to an E-book reader, and not reading it in a PDF format, may encounter some unusual issues with things like spacing, particularly when dealing with hyphenated words. Some of this, however, may be correctable if the reader can change margin settings, or read it in a PDF format.

The author concludes his work with a brief epilogue concerning what various American pilots did following the Second World War. This provides a wonderful conclusion to the book and reminds the reader that when the fighting was done, many of these men went back to ordinary lives. While not a deep technical analysis, *Rain of Steel* provides something for all students of this period, particularly those wanting to look at the events of the kamikaze campaign and the last year of the Second World War.

Michael Razer Ward, Arkansas

Kristian H. Nielsen and Henry Nielsen. *Camp Century—The Untold Story of America's Secret Military Base under the Greenland Ice*. New York, NY: Columbia University Press, www.cup.columbia.edu, 2017. 352 pp., illustrations, notes, index. US \$ 30.00, paper; ISBN 978-0-231-20177-3.

Nicknamed the "City under the Ice," Camp Century was an installation built and operated by the American army in the ice of the Greenland icecap during the heyday of the Cold War. For the first time, a new book by Danish authors Kristian Nielsen and Henry Nielsen provides a comprehensive, easily accessible, English language account of

the history of this installation from its inception to its abandonment. The original version of the book was published in Danish by Aarhus University Press in 2017.

The story of Camp Century is remarkable in many aspects. On the one hand, it was one of the first under-theice research stations ever built, with many of the technologies used in its construction applied later for civilian Antarctic research stations. On the other hand, it was a US military installation powered by a modular nuclear power plant that would serve as an experimental platform for the later construction of a launch complex for US intercontinental ballistic missiles (ICBMs). These missiles carried nuclear warheads (Project Iceworm) in Greenland, a part of Denmark, a country with a strict non-nuclear weapons policy. Although originally designed to explore military capabilities, the project was used mainly for civilian research purposes, including drilling one of the first ice-cores that allowed scientists to understand the climate history of the globe. Finally, it was a project that was characterized by strict military secrecy on the one side and proactive public relations on the other, such as documentaries and even visits by the Boy Scouts of America. Altogether, Camp Century was probably one of the most contradictory military projects in high latitudes in modern history.

The authors should be highly commended for unearthing, for the first time, the sources (many of them only declassified recently) that allow not only for piecing together the factual history of the conception, planning, construction, operation, and abandonment of Camp Century, but recovering the background stories and the numerous contradictions within the project. The book mainly follows a chronological approach, beginning with the rationale for building the installation on Greenland and an analy-

sis of the tricky Danish-US relations for everything that relates to Greenland as a part of Denmark where America could basically do whatever it pleased without any fear of real Danish opposition. Next comes a discussion of the construction history of the camp and an account of operations reaching from military trials for all kinds of under-the-ice operations to Camp Century becoming one of the first major research installations for climate research with the help of ice cores. Finally, the book addresses today's environmental concerns regarding the remains of the station that are still embedded in the Greenland icecap.

This book sheds light on a segment of Cold War history that has been virtually unknown, where even specialists in Greenlandic history or Cold War history in northern latitudes are probably aware of only a small fraction of what was really going on, and more importantly, why it was going on. A comparably large number of construction blue prints and photographs of Camp Century help the reader to not only understand the actual design and operation of Camp Century, but also why it became kind of a blue print for many Antarctic research stations constructed in the decades to follow. Readers also learn why the concept of the under-the-ice station was ultimately abandoned, due to the impossibility of retrieving all the remains when abandoning a station.

An index and references to the sources (archival and otherwise) make the book not only an important research publication in itself, but also a useful reference tool for nearly any project dealing with the Cold War in the Arctic, US-Denmark-Greenland relations in the post-Second World War period and other topics like the history of construction of research stations in Arctic/Antarctic environments.

Of course, the book is written mainly from a Danish perspective, and while

this might be the most obvious and useful perspective for this subject, there are certain aspects where most North American readers and naval historians would have preferred a more in-depth analysis. In particular, the rivalry among the main branches of the US military that was an important element of the US Army coming up with the idea for Camp Century is more or less completely missing, as well as the role of American nuclear submarines capable of launching ICBMs with nuclear warheads.

Nevertheless, this book must be credited with unearthing the amazing history of Camp Century and providing, for the first time, a more or less complete account of its history.

It is a must-read for any historian with a serious interest in the Cold War in the Arctic, for historians interested in the complex but little researched US-Greenland relations, but it should also be recommended to anybody who is interested in the design history of Arctic/Antarctic research stations and the wider complex of the development of various launch platforms for nuclear weapons during the Cold War, including submarines. I would consider it recommended reading for any younger colleagues who have not experienced the era of the Cold War themselves, as it easily illustrates the mindset of the time. This was a period of enormous technological achievements and "an everything is possible" mentality that produced not only an under-the-ice station like Camp Century, but also nuclear submarines capable of operating under the Arctic Sea ice. Even phantasmagorical military projects, normally seen only in a James Bond movie, no longer feel like science fiction after reading about Project Iceworm. This large-scale missile base in the Greenlandic ice-cap that was (fortunately) never realized, but for which Camp Century was a first experimental platform, would have dwarfed

anything Dr. Evil could have dreamt up.

While the authors have without any doubt produced an important, well researched scholarly book of high analytic quality, recommended to various groups of academic readers for its contribution to a number of historic sub-disciplines, it might also appeal to anyone who enjoyed Stanley Kubrick's 1964 movie *Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb.* While it obviously lacks the film's drama, *Camp Century* clearly shows that some of Kubrick's characters were not that far from the historic reality of the Cold War.

On a more positive, contemporary note, this book should also be a mandatory read for anyone interested in the early history of using the world's ice sheets as global climate archives. It is proof that a concept that began with one set of intentions can sometimes turn into a very different project, one that helps us understand the world in which we all live, regardless of which side of the former Iron Curtain we inhabit.

Ingo Heidbrink Norfolk, Virginia

Norman Polmar and Lee J. Mathers. *Opening The Great Depths: The Bathyscaph Trieste and Pioneers of Undersea Exploration*. Annapolis, MD: U.S. Naval Institute Press, www.usnip.org, 2021. 295 pp., abbreviations, illustrations, appendices, lists, notes, bibliography, general index, ship index. US \$26.97, cloth; ISBN: 9781682475911.

On 4 October 1957, the Soviet Union launched the world's first artificial satellite into orbit and the international space race was on. Meanwhile, a race to explore *inner* space was happening. In 1958, the US nuclear submarine *Nautilus* – the world's first nuclear submarine – voyaged nearly 1,000 miles under

the Arctic ice to the North Pole. On 23 January 1960, less than three years after the first Sputnik launch, Lieutenant Don Walsh of the US Navy, and Swiss citizen, Jacques Piccard, piloted a firstof-its-kind deep submersible vehicle to the Pacific Ocean floor. On the Mariana Trench, at a depth of 35,814 feet, they spent twenty minutes looking through the Plexiglass view port, observing a shrimp, a fleet of medusae, and what Piccard identified as a flat fish, or sole. Visually confirming life at these depths and pressures was an important finding, as was the design and operation of Piccard's deep submersible.

Opening The Great Depths is the account of the Bathyscaph Trieste and its subsequent use and development by the US Navy. Piccard's design, that of a "sea balloon," did not require a cable to raise and lower it. Piccard's son, Jacques, was instrumental in getting the necessary funding, and ultimately in getting the US Navy to buy the bathyscaphe – and his services. But, as the authors relate, the relationship between the Navy and Piccard was not always smooth.

The Navy operated three separate deep-sea, self-propelled bathyscaphs, each named Trieste, over several decades. The first Trieste had been designed by Piccard's father, Auguste, a Swiss scientist and explorer who had also set high altitude records for manned flight in his balloon, studying gamma radiation in the stratosphere. Piccard called his diving device a bathyscaphe, meaning "deep vessel," distinguishing it from the tethered bathyspheres developed by Americans William Beebe and Otis Baron. Piccard named his bathyscaph Trieste, in honour of the Italian seaport where it was conceived and constructed, largely with money from the FNR (Luxembourg National Research Fund). Auguste's son, Jacques, working closely with his father, took charge of negotiations. In Europe's post-war economy, the United States was the most likely buyer, having the ability to implement and further advance the technology. Individuals in the Office of Naval Research took notice of Piccard's invention and recognized its potential for applied research, recovery operations, and intelligence. "We got it for a steal. I think we paid about \$1 million for it, but that also bought the new sphere; it bought Piccard's services and the Trieste. All of this was about one million and it got the Navy started in the deep-submersion business," according to Arthur E. Maxwell, head of the Office of Naval Research oceanography section (51).

Curiosity about the depths of the ocean has long fascinated terrestrials. Jules Verne's novel, Twenty Thousand Leagues Under the Sea, was first published in serialized installments in March 1869 through June 1870 and remains a science fiction classic. Two centuries earlier, in 1620, Dutch engineer and inventor Cornelis Drebbel built a navigable submarine while working for the English Royal Navy. American inventor, Robert Fulton, living in France, developed the first *Nautilus* submarine, in 1800. None of these early manned subs could dive very deep, or stay underwater for long periods.

In 1949, American Otis Barton took his bathysphere, the Benthoscope, to 4,488 feet off the coast of California. But only Piccard's design proved capable of taking humans to the hadal depths of the ocean – below 20,000 feet. During the Cold War era, this capability became more important than just ribbon chasing and record breaking. The Office of Naval Research recognized the potential to retrieve satellites, re-entry vehicles, submarines, and nuclear warheads resting on the ocean floor. A bathyscaphe such as *Trieste* proved to be important to US Navy and Air Force research, op-

erations, and intelligence.

While the authors do justice to Auguste and Jacques Piccard's seminal roles in the design and construction of the first bathyscaphe, the book's emphasis is on the further development and use of *Trieste* after it was purchased by the US and under the control of the Naval Electronics Laboratory in San Diego. In the years following its acquisition, Trieste and the two vessels developed from it, all carrying the same name, made over 300 dives to carry out the objectives of various programs and operations, some only recently declassified. A number of these dives are described in the book, with interesting details about obstacles and challenges the mariners faced, and how they dealt with them.

The authors mention many officers, personnel, scientists, and civilians involved. The writing is not heavily technical or jargoned; a list of abbreviations and a list of US Navy Ship/Submarine/Submersible designations are helpful. Overall, I found the work to be an objective biography of a particular series of specialized vessels – and of their involvement in exploration, intelligence, and military operations.

Perhaps the book's biggest strength is in showing how the success of the program depended on the knowledge, skill, resourcefulness, and courage of many individuals, and on the support ships and their officers and crew. A foreword by Dr. Don Walsh, the officer-in-charge of the bathyscaph *Trieste* on the 1960 record-setting dive, adds valuable historical perspective.

The *Trieste* Program, costly to maintain, was retired in 1983. In a brief postscript, the authors bring the readers forward to 2019, summarizing the continued use of submersibles, mostly unmanned, for military defense, commercial, and scientific agendas. Presumably, there are classified projects that have evolved from *Trieste's* experiences, in

progress. In the civilian sector, American adventurer Victor Vescovo, using private funding, is setting new records at the helm of his own deep submersible. On his personal quest, Vescovo pays homage to the engineering and operations pioneered by the people behind the three bathyscaphs *Trieste*. At this writing, Fabian Cousteau, Jacques Cousteau's grandson, is building *Proteus*, a nonprofit marine laboratory billed as an international *inner* space station, just 60 feet beneath the waves, off the coast of Florida.

Linda Collison Steamboat Springs, Colorado

Stephen Roskill. *The Secret Capture: U-110 and the Enigma Story*. Barnsley, S. Yorks: Seaforth Publishing, www. pen-and-sword..co.uk, 2020. (Originally published 1959.) 176 pp., illustrations, maps, index. UK £10.99, paper; ISBN 978-1-52678-178-9. (E-book available.)

Capturing an enemy's intelligence tools has been an aim of military forces since the beginning of warfare. In the Second World War, the German military's prime tool for transmitting and receiving messages was the Enigma machine - a device which slightly resembled a typewriter but had plugs for settings and wheels containing letters and numbers inside. The Germans had codebooks to advise the recipient of an encrypted message of the proper settings of the plugs and wheels. Poland had photographed the wiring and wheels of an early Enigma machine in 1929 and learned more about Enigma in 1931. The information gathered then was shared with the French. Over the next few years, the Polish military intercepted many German messages. During summer, 1939, before the German invasion of Poland on 1 September of that year, the Poles

turned all they had on Enigma over to the British and French. This was helpful to the British, but as improvements were made to Enigma, it was clear that the codebooks associated with Enigma were needed. This is why the story of the capture of German U-boat U-110, told first by Roskill in 1959, was so critical to the Allied effort to combat the German anti-shipping submarine offensive.

The basic story is simply told. In May 1941, British convoy OB.318 was attacked twice by four German U-boats, U-94, U-110, U-201 and U-556. In the second attack, on 9 May 1941, U-110, commanded by U-boat ace, Captain Fritz-Julius Lemp, was forced to the surface. The submarine's crew was quickly captured, although Lemp was never found. (He may have drowned in the sea, although at least one source suggests he was killed by the British.) A boarding party from one of the escorting ships, HMS Bulldog, went into U-110, and seized items, including an intact Enigma machine and associated codebooks. Those last two items were an intelligence coup, as their capture enabled the Royal Navy to read the German Navy's codes for some time and lessen shipping losses. Bulldog attempted to tow U-110 to Great Britain but the submarine sank on the way.

This slim volume (156 pages) is a fine account of a battle which proved so helpful to the British during the critical years of the Second World War, when Britain stood alone. (It was not until 22 June 1941, that Germany invaded the Soviet Union, thus bringing in that country to Britain's side. The Japanese attack on Pearl Harbor, Hawaii Territory, USA, on 8 December 1941, finally drew America into the war on Britain's side. But, in May 1941, Britain's only support was the Commonwealth nations.) Winston Churchill himself admitted that, throughout the war, the only thing

that terrified him was the likely success of German submarine warfare. German success in that realm could have starved the UK into submission.

The Secret Capture consists of nine chapters, a foreword, acknowledgements, and an index. A new introduction and foreword were added for this edition. Barry Gough, one of Canada's distinguished military historians, wrote the new foreword and Charles Baker-Cresswell, son of convoy OB.318's commander, added the introduction which offers valuable information about his father's personality and command style. The book contains a relevant photograph section plus several diagrams showing the position of the convoy ship, and the routes of the various ships involved, including the U-boats. Roskill, who passed away in 1982, authored the Royal Navy's official history of the Second World War. His writing was clear and the diagrams and photos are helpful. The photo of Lemp is noteworthy – he is shown wearing the white U-boat Captain's cap and a Knight's Cross around his neck. The British boarding party found these; the cap is now in the possession of the Imperial War Museum while the Knight's Cross was given to Lemp's family in 1958.

This book was written for two reasons: first, to record the battle which resulted in the capture of an Enigma and related codebooks. For reasons of security, the news of the Royal Navy's capture of those items could not have been released to the general public. The second reason is less obvious: to correct the record. In June 1944, the US Navy captured U-boat U-505 and towed it to Bermuda. After the war, U-505 was towed to Chicago, Illinois, by way of the St. Lawrence River and the Great Lakes. It was the US Navy's first capture of an enemy ship since the War of 1812. The capture was greatly publicized and U-505 remains on display today at Chicago's Museum of Science and Industry.

Due to the publicity surrounding U-505, Roskill wrote *The Secret Capture* to tell the world that there had been many other captures of enemy submarines before U-505's capture. The first chapter of Roskill's book relates the capture of ships throughout the ages and the second chapter shows that the Royal Navy and its allies captured many enemy submarines throughout the Second World War – although none survived to be put on display.

Roskill's book is a fine account of a battle which helped the Royal Navy at a critical time. It is recommended.

Robert L. Shoop Colorado Springs, Colorado

Mariano Sciaroni. A Carrier at Risk. Argentinian Aircraft Carrier and Anti-Submarine Operations against Royal Navy's Attack Submarines during the Falklands/Malvinas War, 1982. London, UK: Helion and Company, www.helion. co.uk, 2019. 72 pp., illustrations, maps, tables, notes, bibliography. US \$29.95, paper; ISBN 978-1-911628-70-5.

A Carrier at Risk is the fourteenth installment and first part of Sciaroni's contribution to the Latin America @ War Series that covers Argentine antisubmarine (ASW) operations in the Falklands/Malvinas War. This was the lesser-known hot war fought between Argentina and the United Kingdom at the height of the Cold War between the United States and Soviet Union. In response to what the Argentine military junta thought would be a fait accompli (an irreversible action or done deal) by invading the Falkland/Malvinas Islands, the United Kingdom countered with the largest naval task force seen since the Second World War. This brief, fierce war that pitted two countries with western technology and tactics against each

other has been studied in depth by allies and adversaries alike. While much has been written about the amphibious operations, air attacks, and of course, the infamous attacks on both the Royal Navy destroyer, HMS *Sheffield*, and Argentine battle cruiser, ARA *General Belgrano*, little has been revealed about how the Argentine Navy conducted antisubmarine warfare, until now.

This book covers the harrowing tale of how Argentine antisubmarine aircraft and helicopters protected their carrier, the ARA 25 de Mayo from Royal Navy submarines in a deadly game of cat and mouse. Historians argue that after the Royal Navy sunk the General Belgrano, Argentina immediately withdrew all her naval forces out of fear to preserve a "fleet-in-being" concept to maintain regional credible deterrence. Sciaroni, however, offers a different narrative. He suggests that the 25 de Mayo, Argentina's sole aircraft carrier, did not immediately withdraw; rather, she and her escorts continued their hunt for the Royal Navy submarine force.

Using British and Argentine archives, Sciaroni paints a full picture of Argentina's anti-submarine operations in the days leading up to the sinking of General Belgrano and after. Using old S-2E Trackers and H-3 Sea King helicopters with antiquated acoustic processors and tactics, the ASW squadrons protected 25 de Mayo against the five British nuclear submarines and a single diesel submarine patrolling the Malvinas/Falkland Islands. juxtaposes the Argentine ASW assets against American ASW assets in order to show how the Argentines succeeded in the Herculean task of protecting their sole carrier. A typical US Carrier Battle Group ASW response would have been comprised of squadrons of ASW helicopters and fixed-wing aircraft, five to eight escort frigates and destroyers, one to two nuclear submarines, and the

assistance of overhead satellites. The Argentine Navy had just three destroyers, two anti-submarine helicopters, and two functional S-2E trackers. To make matters worse, the Argentine carrier and surface task force could only run at 20 knots due to defunct steam propulsion plants, whereas the British nuclear submarines could sustain 30 knots underwater. The fact that 25 de Mayo did not meet the same fate as General Belgrano in the midst of waters infested with British submarines is a testament to their methods and tactics that worked in spite of the odds.

For those unfamiliar with ASW operations or tactics, Sciaroni explains the basics in laymen's terms and then explicitly describes the equipment, aircraft, and capabilities used. After stating the capabilities and limitations of the platforms, he carefully reconstructs a day-by-day account of the carrier's ASW operations from 3 May 1982 until finally returning to territorial waters six days later. He concludes that 25 de Mayo returned home safely because the British submarines, in fact, were unable to sink the carrier, as opposed to their choosing not to sink it.

When describing what occurred, Sciaroni correlates material from British and Argentinian archives with firsthand accounts of the action. He even retrieved records related to HMS Splendid, a Royal Navy submarine, that mistakenly stalked the Argentine cargo ship ELMA Formosa thinking it was 25 de Mayo. Although not a part of the Argentine ASW effort, examples like this capture the sense of the "fog of war" that covered the two nations battling at sea. The secretive nature of antisubmarine warfare sometimes begets more questions than it answers. For example, in an effort to learn more about their western adversaries, the Soviets would fly their Tu-95 Bear bomber over the Royal Navy task force to gather intelligence but beyond this interaction, a "ghost contact" gained by the Argentines would continue to fuel further questions and speculations of "who" and "what" it was when compared against Royal Navy and Argentine Navy archives.

A Carrier at Risk is an objective look at Argentine ASW operations. Grounded in fact with minimal conjecture, Sciaroni captures the complexities of ASW without becoming too technical. While only 72 pages long, the book is filled with information not found elsewhere. The Falklands/Malvinas War continues to be a veritable goldmine of lessons to apply to future warfare, especially for ASW operations. This book is a rich resource that covers the triumphs and failures of both the Argentine and Royal Navies.

Dylan Phillips-Levine Buenos Aires, Argentina

Douglas V. Smith. *Carrier Battles: Command Decisions in Harm's Way.* Annapolis, MD: U.S. Naval Institute Press, www.usni.org, 2020 (originally published 2006). xxxiii+346 pp., illustrations, tables, appendix, notes, bibliography, index. US \$24.95, paper; ISBN 978-1-68247-502-7. (E-book available.)

This is a reprint of Smith's 2006 study on the decision-making processes of commanding officers during the five carrier battles of the Second World War in the Pacific Theatre. Six central chapters focus on the engagements from a primarily American perspective, although Smith includes some of the Japanese rationale as well. Drawing from an impressive array of sources, he aims to illustrate the factors that led to the offensive mindset of American commanders and their ability to make quick and effective decisions in combat situations. Maps and diagrams used throughout the work chart the movements of both surface vessels and aircraft. Additionally, an appendix of the Japanese plans regarding the Greater East Asia Co-Prosperity Sphere appears at the end to aid in understanding some of the Japanese planning and mindset. An extensive collection of endnotes, a bibliography, and an index round out the work. Smith's extensive footnotes contain additional information rather than just source citations.

Prior to describing the carrier battles, Smith spends thirty-two pages discussing the prewar education of the American naval officers involved in wartime operations. Largely focusing on how men were taught "the wrong stuff" in the "right way" to encourage tactically-offensive decisions, this segment includes examinations of the perceived role of air power along with a rather interesting examination of the infamous court martial of Brigadier General William "Billy" Mitchell (9). The chapters that follow represent the five carrier battles, with relevant pre-engagement data discussed within each. The length of discussion varies, with 28 pages devoted to the Battle of Santa Cruz while the eponymous Battle of Midway boasts 68 pages. The Battle of Coral Sea section includes an account of the attack on Pearl Harbor, extending the average discussion of four of the five battles to around thirty pages each.

Smith's analysis of the engagements is quite complimentary to the American commanders, particularly Admiral Frank J. Fletcher. A man often maligned for abandoning the Marines on Guadalcanal, Fletcher's decisions are defended via historical analysis and direct primary source citation, lauding his decision to preserve the carriers and surface vessels for future engagements. The author's breakdown of engagements and decisions is fairly detailed, highlighting the American ability to deviate and improvise in ways alien to

the highly orchestrated plans of Japanese naval warfare. He believes that the pre-war American textbook, Sound Military Decisions, served as the key educational cornerstone for the American naval officers involved in the carrier battles, and consistently drives home how the lessons and techniques the men were taught in their pre-war education gave them the foundation to succeed in actual combat scenarios. Smith further breaks down his analysis of battles in retrospective conclusions, where individual decisions are given a school-type "grade," an admittedly more subjective part of the work.

Nevertheless, several suggestions for improvement come to mind. The book makes very little use of photographs, generally placing a single small image at the start of each chapter. Including a few more of the many images available to illustrate personnel, ships, and engagements would help with the visualization of both the personalities involved and the situations faced during the battles. There is a wide range in quality of both maps and engagement diagrams from highly detailed examples to almost useless, unlabeled shapes (64, 105, 115, 132, 140, 160). The replacement of the more crude diagrams from the Naval War College with more detailed scaled examples would be greatly appreciated. Furthermore, the Japanese perspective was relatively lacking. The expansion of the analysis to better examine Japanese pre-war training, commanders, and their decision-making would further enhance the work and help account for why one nation's officers triumphed over another's. Finally, the foreword seems almost disconnected from the rest of the work, focusing more on the submarine war than dealing with carrier battles. Addressing these issues in a future edition would definitely strengthen the work.

Carrier Battles is a good resource

for those interested in the role of American commanders in the Pacific Theatre. It is by no means perfect, with several venues available for improvement and expansion. For students of American naval tactics, however, or those interested in the actions of Admirals Fletcher, Nimitz, Kincaid, and Spruance, and scholars seeking a compendium of key carrier actions during the Second World War, the work offers a solid compilation of data and analysis. Hopefully Smith will further refine his work to improve on his relatively solid foundation.

Charles Ross Patterson II Yorktown, Virginia

Anthony Tibbles. *Liverpool and the Slave Trade*. Liverpool, UK: Liverpool University Press, 2018. ix+118 pp., illustrations, notes, bibliography, index. CDN \$32.95, £14.95, paper; ISBN 978-1-78694-153-4.

Liverpool and the Slave Trade is the companion book to the International Slavery Museum in Liverpool. It introduces readers to the story of the slave trade and, in particular, Liverpool's role in that notorious trade and the profit it reaped from trafficking in humans. Brief, yet uncompromising, it is a valuable addition to our understanding of slavery, especially its role in bringing prosperity to a city through which relatively few slaves directly passed.

Six chapters tell the story from the start of the slave trade to the abolition and aftermath for Liverpool. The first lays out the slave trade cycle as it related to Liverpool (though Tibbles does occasionally touch on other European cities). The merchants of Liverpool who engaged in the trade would send ships with merchandise desired in western sub-Saharan Africa to trade for Africans captured by the local African slavers

and their European collaborators. The captured men, women, and children were then loaded on ships and carried to South America, the West Indies, or North America. There they were sold, and ships' captains then either bought goods from these areas (i.e., sugar and coffee from South America and West Indies, cotton from the colonies), or simply brought back bills of sale, that could be exchanged for money upon arrival in Liverpool. Though the English slave trade began in the ports of London and Bristol, Liverpool gained prominence by 1750, sending more slave ships to Africa than all the other British ports together. Between 1780 and 1807, Tibbles informs the reader, 80 percent of the British slave trade, and half of Europe's slave trade, originated in Liverpool.

Tibbles explores the Liverpool families who benefited from the slave trade and the men who went to sea to carry it out. He touches on the trade goods sold to acquire slaves, which included coiled brass wire bracelets and pieces of brass or copper, called manillas, that were used as currency in West Africa. At the height of the commerce, some 200 Liverpool merchants dominated the trade. Most worked in groups to arrange and finance expeditions. Shares in the vovage were sold to local investors, which increased the number of possible profiteers from slavery. A trade voyage was costly to organize and financial rewards could take a year, or more to recover.

Once ships reached Africa, acquiring the number of slaves needed to fill the ship could take months. Ship captains (often with a financial stake in the journey) would arrive at a slaving port and negotiate with their local contacts bartering for slaves. Having reliable contacts in the local system of slavers was critical for success, so Liverpool merchants spent money and time on building relationships with African chiefs who dealt in slaves. The mer-

chants would even offer to educate the chief's sons in England, thus deepening the web of relationships, while grooming the next generation of slave traders. The middle passage (between Africa and the American destination) was the most dangerous time. The enslaved Africans were kept in such confined and filthy conditions that sickness and death were common. Crews were susceptible to contagious diseases, as well, and their death reduced the ship's compliment, which could put everyone at risk. Revolt of the enslaved was always a possibility.

A short fourth chapter focuses on the profits made by Liverpool merchants. The slave trade helped to build the city of Liverpool, from expanding its dock system to providing bankers with money for investment in other economic development schemes, often involving local industry. With significant financial gain often came increased political power for merchants within the community, resulting, in some cases, in election to Parliament, or at least to the local council. Whiles some sailors may have earned well, most were not enriched by the experience in any sense of the term. Certainly not all slave voyages were successful. Death of too many of the slaves, capture by enemy ships, and shipwreck all served to financially stress, or even bankrupt investors.

The abolitionist movement was a harbinger of change. Liverpool merchants and their political representatives in London resisted the drive to end the slave trade. They produced speeches and pamphlets protesting the economic harm such a development would create. There were, however, abolitionists in Liverpool who worked to ensure the trade's end. William Roscoe, one of these, was elected to Parliament in 1806, in time to vote in favour of abolition. While fighting its end, slave merchants diversified their businesses into other financial activities to offset the

cost of losing the profitable business.

Tibbles ends with a discussion of the ongoing profits of slavery, both in the West Indies (until emancipation in 1834) and the American South (until 1865). Liverpool merchants, as well as others, developed the palm oil and cotton industries using the raw product produced by slaves. Needless to say, these economic activities promoted the continuation of slavery. But with changes to sugar tariffs in the 1820s, plantations in the West Indies gradually became financial drains on their British owners (including those in Liverpool). Even with the government's financial compensation for the emancipation of their slaves, West Indies plantations were on their way out. This began a process by which many in Britain forgot their direct connection with the slave trade. The book ends with a section on Liverpool's coming to terms with its slaving past, culminating in the building of the International Slavery Museum.

Frequent sidebars explore, in more detail, aspects covered by the chapter in which they appear. From Liverpool's earliest slave traders (i.e., Sir Thomas Johnson and Richard Norris (6) through the Liverpool families that benefited from the trade (i.e., the Tarleton's (12) and the Cunliffe's (16), to the men who made their living at sea, such as Owen Roberts (49), and those who profited by the whole trade, including the West Indies merchants (66), bankers, and slave traders (75). These brief snippets manage to dive deeply enough into their subject to provide the reader with a good glimpse of the people behind the trade. Together they illustrate the personal financial gain made from the slave trade by Liverpool's middle and upper classes.

Tibbles clearly notes areas where academics still debate the nuances of what took place, who prospered and by how much, but he is acutely explicit on

the horrors of the trade in humans, the profits reaped, the company fortunes made, and the mansions built. For anyone who thinks of the slave trade as a distant event from British shores, this book shatters the illusion. The direct benefit is traced right back to the docksides, bank vaults, factories, and the front steps of the great homes of Liverpool.

The book presents three maps and 68 images (many in colour) of the slave merchants, seamen, places, ships, and victims of the slave trade. Though not noted on the abbreviation page, those attributed to NML are from the National Museums Liverpool, providing the reader with a glimpse of the International Slavery Museum's Liverpool exhibit. It is an impressive array of images that help to give life to this horrific story. Just the pictures in this volume, alone, could provide the visual stimulus for a teacher to capture the minds of their students as they broach the topic.

The bibliography is thorough, with the archival sources focused, naturally, on Liverpool. The index is workable. While written for the general public, this book will be of use to academics studying the slave trade's influence on economic and urban development in slave trading nations. As noted above, it would be a valuable resource for teachers engaged in introducing the story of slavery to their students.

Thomas Malcomson Toronto, Ontario

Tom Womack. The Dutch Naval Air Force Against Japan. The Defense of the Netherlands East Indies, 1941-1942. Jefferson, NC; McFarland & Co., Inc., www.mcfarlandpubs.com, 2006. 207 pp., abbreviations, illustrations, appendices, charts, endnotes, bibliography, index. US \$35.00, paper; ISBN 0-7864-2365-X.

The prime objective of Imperial Japan when initiating combat in 1941 was to give that nation access to the natural resources of Malaya (now Malaysia) and the Netherlands East Indies (NEI-now Indonesia.) In December 1941, Japanese forces attacked the American naval base at Pearl Harbor, Hawaii, the then-American colony of The Philippines, the British colony of Hong Kong (which was defended in part by two Canadian Army battalions,) and then Malaya. The ultimate objective, the NEI, was the last attacked.

The Dutch forces in the NEI had an impossible task—the NEI was spread out over thousands of miles of the Pacific Ocean and contained literally hundreds of islands, both large and very small. The Dutch military in the NEI was only adequately equipped and trained, the troops were largely indigenous peoples of the NEI (of doubtful reliability in combat) and spread across the vastness of the territory. troops-air, sea, and land-faced a combat-tested enemy in the Imperial Japanese Army and Navy and their respective air forces. Moreover, the NEI had an additional handicap: the Dutch homeland had been conquered by Nazi Germany in May 1940, and the Dutch government was in exile in London. These facts made it difficult, if not impossible, for the NEI forces to be properly reinforced and equipped.

Nevertheless, when Japanese forces finally confronted them, the Dutch forces resisted. The naval battles in the NEI have been chronicled and more recently, the air war over the NEI has received attention from historians. But one facet of the NEI campaign was little-known; that of the Dutch Marine Luchtvaart Dienst (MLD—Naval Air Service) against the Japanese forces. In *The Dutch Naval Air Force Against Japan*, Tom Womack fills in a gap in Second World War history.

Unlike the Imperial Japanese Navy

Air Force (IJNAF,) the British Fleet Air Arm, or U.S. Naval Aviation, the MLD did not possess truly dedicated combat aircraft such as fighters, dive bombers, and torpedo bombers. They were equipped with flying boats of various ages and effectiveness, all of which had some offensive capabilities against enemy ships and some defensive capability against enemy aircraft. In part, this made sense: flying boats were the best technology of the time for maritime reconnaissance and search and rescue. But those aircraft proved to be ineffective overall against the IJNAF's fighter aircraft—the A6M Zero, the best carrier-based aircraft of its day. MLD squadrons were small, containing three or four aircraft at the most. Individual MLD aircraft or in pairs or small groups, did attack Japanese shipping and achieved some results. No matter how brave the MLD's aircrews were, the result was inevitable—the almost total destruction of the MLD and the Japanese conquest of the NEI. In April 1942, after the Japanese victory in the NEI, Queen Wilhelmina of the Netherlands awarded the MLD the highest Dutch medal for bravery, the Militaire Willemsorde der 4e klasse, in honour of the force's efforts against Japan.

Womack's book covers the MLD's efforts. His book contains ten chapters covering the MLD's equipment and operational doctrine; prewar incidents between the Japanese and the NEI; the MLD's efforts in December 1941, and its efforts after the U.S. Navy evacuated its units from the Philippines; initial Japanese invasions and the NEI's defensive efforts; the air assault on the island of Java, which was the capital of the NEI; the collapse of Dutch resistance; and the post-conquest effort to rebuild the MLD in the USA—which gave the Dutch the ability to have an effective naval air arm post-war. The narrative is complete and well-written. Womack embeds photographs of aircraft, MLD bases, and personnel within the text, bringing it to life. Tables and maps, also embedded into the text, help clarify where MLD bases were located, anti-aircraft equipment, operational spheres of Japanese air superiority, and the strengths of the IJNAF and Imperial Japanese Army Air Force (IJAAF) units employed against the NEI. The endnotes contain much substantive information as well as sources for further study.

The appendices are equally valuable. Each MLD squadron is listed together with its commanders, bases, each aircraft in that squadron, and the fates of those aircraft. Further appendices list each MLD aircraft by type, and its eventual fate, technical specifications for the MLD aircraft; technical specifications for the IJNAF and IJAAF aircraft operational in the NEI, and a listing, together with ultimate fate, of each Dutch seaplane tender ship. Following the appendices are three charts, showing MLD losses by month, MLD losses by its principal aircraft types, and MLD aircraft losses by cause. The bibliography lists a large number of relevant primary and secondary sources. The cover has a dramatic photograph of a Dutch Fokker seaplane just launched from the light cruiser, Hr.Ms. de Ruyter.

This is a valuable book. The information it contains is complete and will satisfy even the most meticulous researcher. It illuminates a previously-overlooked part of the early Pacific War and pays tribute to valiant aircrews and their ground crews. While the conquest of the NEI was really a foregone conclusion, Womack's book shows that the MLD made that military success was far from easy for the Japanese. It is recommended for students of Dutch military history, the early Pacific War and naval aviation in general.

Robert L. Shoop Colorado Springs, Colorado

G.R.G. Worcester. *The Junks and Sampans of the Yangtze*. Annapolis, MD: U.S. Naval Institute Press, www.usnip. org, 2020. 656 pp., illustrations. US \$54.95, cloth; ISBN 978-1-68247-636-9.

If the design of a ship or boat is viewed as the organic product of its cultural environment (encompassing the full spectrum of traditions, beliefs, functional requirements, and the technological, material, and operator constraints of the time), then Worcester's magnum opus can be rightly understood as the ultimate ecological encyclopedia of Chinese watercraft, most especially of the watercraft of the Yangtze River system.

Weighing in at an authoritative 2.8 kg, this is an astounding volume in its breadth and detail of coverage. The history of this work is as impressive as its bulk. First published in four volumes between 1940 and 1948 (interrupted by the author's almost 3-year internment in a Japanese prisoner of war camp), it was republished in 1971 by the United States Naval Institute Press in a one-volume edition and is now re-issued 49 years later. This longevity is a testament to its unique stature as an unparalleled reference (as acknowledged in Joseph Needham's Science and Civilization in China, a monumental 10-volume work, of which Volume 4 Part III: Civil Engineering and Nautics (CUP, 1971) itself spans an impressive 930 pages).

Worcester himself has an interesting history. Born in 1890, he entered the Royal Navy and served under sail, rounding the Horn as a midshipman. He left the Navy in 1919 and thereafter spent 33 years with the River Inspectorate of the Chinese Maritime Customs, a unique Service under the direction of the Chinese central government, but largely staffed at senior levels by foreigners. The CMC was established in 1854 with the aim "to do good work for China in every possible direction." As

the author notes, this was "far from being a mere revenue-collecting machine" (26) but rather was involved in a wide range of maritime activities, including harbour and waterways management, postal administration, weather reporting and anti-smuggling operations. As part of the associated information gathering, the CMC produced a considerable series of reports that are now of great historical value.

As is evident in this volume and two other of his books, The Junkman Smiles (Chatto & Windus, 1959) and Sail & Sweep in China (HMSO, 1966), Worcester's depth of interest in all aspects of the life, work, and materiel of the junkmen harkens back to his days of committed scholarly interest in eastern languages, history, and culture. It is significant that the extent of his knowledge and interest was so well recognized and valued in the Chinese Maritime Customs Service that for the last eight years of his service he was seconded to research duties and given license to visit many places in the interior not normally accessible to foreigners.

This tasking was under the direction of Sir Frederick Maze, the last British Inspector General of the CMC, who eventually retired to and passed away in Victoria, British Columbia. Maze's legacy of interest itself is embodied in a model collection in London's Science Museum in Kensington, and the subject of Worcester's Sail & Sweep in China. On the subject of models, Worcester comments on the Chinese attitude to models, noting that "model-making, per se, was scarcely ever practised in China," but that from the end of the nineteenth century, production of models for tourists had led to a proliferation of "fancy junks of no particular type" (Junks and Sampans, 19). He comments that in a model (as opposed to a drawing) the use of three dimensions increases the possibility of error, and notes that arranging for the production of accurate

models entailed not only engaging actual junk carpenters, but also providing them with scale templates. Even so, the builders expressed skepticism and amazement about the utility and purpose of the activity, asserting that a junk only seven feet long would not be productive in terms of cargo capacity, and that "surely, London, if it required salt, would have its own salt junks ..." (*The Junkman Smiles*, 231).

Worcester was a very accomplished draughtsman/sketcher and the fruits of his knowledge are conveyed not only in the textual commentary and detail, but also in innumerable scale diagrams, illustrating both the configuration and proportions of the vessels themselves, as well as many fascinating details of ingenious functional elements. These details serve to remind us that true technological mastery consists not of using the most sophisticated solution available, but rather of simple fitness for purpose. In another context, a quote from Freeman Dyson is à propos: "A good scientist is a person with original ideas. A good engineer is a person who makes a design that works with as few original ideas as possible." In his record of the details of junk and sampan design, Worcester shows himself to be a connoisseur of simple, functional design.

This volume is organized in four parts. The first deals with aspects of geography, history, propulsion, sails and rigging, fittings (anchors, rudders and compasses), ropes and knotting, cargos and diet, and the lives of the junkmen themselves, including beliefs and superstitions. The next three parts cover three distinct regions: the Estuary and Shanghai; the Lower and Middle River and Tributaries; and the Upper Yangtze and Tributaries. Overall, the book documents over 210 named types of vessels, commenting on such distinguishing features as configuration, construction, and usage.

In a short review it is impossible to do justice to the enormous span and detail of subject matter, but a few examples will serve to illustrate the variety: unsurprisingly, there is considerable attention to the details of the characteristic fully-battened junk rig, with its complex sheeting arrangements and discussions of advantages vis-à-vis western sail plans; extensive discussion (139-147) of the salt industry (most important in a diet of rice and fish) and detailed discussion of two related cargo junks, the crooked-stern salt-junk (507-516) and crooked-bow salt junks (564-575) of the Upper Yangtze; considerable pilotage details of the gorges of the Upper Yangtze; discussion of tracking (the task of hauling a junk up-stream by crew on shore, elevated to a science on the upper Yangtze, involving special knots. harnesses, quick release arrangements. the unique properties of bamboo rope); oared propulsion, in particular the characteristics and operation of the yuloh (a long, curved oar over the stern, with the inboard end tethered in such a way that manipulation of the tether causes the oar blades to fish-tail in a sculling fashion, allowing for propulsion at up to 3 knots); and miscellaneous recipes ranging from wine (Shaohin Wine-boat, 203), to mandarin duck ("symbolic of connubial happiness," 294), as an aside to a discussion of duck convoys involving 2-3,000 birds shepherded over distances of 50-100 miles), to gunpowder (356).

It is clear throughout this book, and his others, that Worcester had the deepest respect and admiration for the culture, traditions, and skills of the junkmen, and for the adaptation of their lifestyle and vessels to service on the various waters of the Yangtze. Although clear-eyed about the hard life entailed, he is clearly envious of the adaptation, as he comments elsewhere that "no nation on earth … understands better how to

loll gracefully on water ..." and quotes (maybe somewhat romanticizing!) from Li T'ai-po's Song of the River (16):

When one has good wine, A graceful boat,

And a maiden's love,

Why envy the immortal gods?

Worcester was quite modest about his contributions: in *The Junkman Smiles* he refers to "my recent contributions on sea-going junks, which have appeared in in scientific and consequently little read journals...." With this wonderful republication of his most significant and most comprehensive work on the water transport system of the Yangtze, there will be no danger of his contributions lapsing into obscurity.

Richard Greenwood Victoria, British Columbia

Stephen Wynn. *The Shetland 'Bus.' Transporting Secret Agents across the North Sea in WWII* Barnsley, S. Yorks: Pen & Sword Military, www.pen-andsword.co.uk, 2021. viii+204 pp., illustrations, notes, appendices, index. UK £ 15.99, US \$39.95, cloth; ISBN 978-1-52673-535-5.

Professional historians too often overlook work by amateurs or buffs, but to do so in the case of Stephen Wynn's Shetland 'Bus,' would be to miss out on a valuable resource. After the fall of Norway in 1940, Norwegian and British officials organized the Shetland Bus; a maritime infiltration/exfiltration route using fishing boats and eventually purpose-modified submarine chasers to ferry hundreds of men and tons of gear, guns, and cash to resistance fighters in Scandinavia. It is an epic of endurance, physical bravery, and nerve. Because guerrillas and saboteurs in Norway (coupled with the threat of a full-scale amphibious invasion) tied down a massive Nazi garrison force until 1945,

these efforts were some of the more strategically significant special operations of the war (62). Wynn – who has written or co-written several books on the Second World War – is to be commended for his detailed account of a captivating and understudied moment in the history of special operations; one that is still historiographically peripheral to stories of commando teams and direct-action raids against continental Europe. The core question in Wynn's study revolves around the nettlesome and prerequisite challenge of how to get raiders to the target by sea. As the book makes clear, that task was a dangerous gauntlet in and of itself.

disappointingly, Somewhat should be noted up front, Wynn's book is not a narrative history of the Royal Norwegian Naval Special Unit - the Bus's official name (62). Rather, it is a caringly annotated dictionary of key Shetland Bus operations, personnel and ships with a short chronological history attached by way of contextual introduction. The heart of the book consists of three chapters filled with concise description and intriguing details about commandos, the raids they carried out, and the boats that got them to Norway. The exploits of Leif Larsen are particularly impressive (64, 122). By contrast, most of the chronological history in Wynn's book is devoted to ancillary questions about the Nazi invasion of Norway or the origins of the Special Operations Executive (SOE) in the United Kingdom – subjects for which more substantive secondary sources already exist (38). The story of the Shetland Bus is more than enough fodder for a monograph. Much of this foregrounding material distracts from Wynn's real contribution.

Shetland is important, Wynn stresses, not only in its role as a staging ground for amphibious raids, but because of the geostrategic features and

history of the North Sea. New technologies (notably aircraft) made the islands valuable in the Second World War as a satellite for power projection (2). History plays a role as well. On an almost Braudelian timeline, the "Bus" grew out of longstanding connections between Norway and the Shetland Islands. Even today the islands are, in many respects, more Scandinavian than Scottish. Norwegians fleeing the Nazi occupation by sea took advantage of those links and in so doing, first illustrated the possibility of a Shetland route. Further excavating the "deep history" connections between Shetland and Norway, we find that the bus's first command HQ was an erstwhile Laird's mansion, built atop the foundations of a Viking longhouse (60).

For all its strengths, the omission of a reference section or a bibliography makes it difficult to fully evaluate Wynn's work. It will also hamper attempts to build on his research. In its published form, Wynn's is a reference book without sufficient references. For example, this reviewer is left wondering if Wynn consulted the oral history records at the Imperial War Museum (in which the SOE is well represented) or Alex Buchner's recently (2020) translated account of the 1940 Battle of Narvik. If not, reviewing those sources would provide a ready-made avenue for future scholars and students to improve Wynn's work. The lack of a map (or ideally, maps) is another limitation. A dizzying variety of coves, inlets, and fjords made this story possible. That same geography also makes it difficult to follow the ins-and-outs of the Shetland 'Bus' without a reference.

That said, the book provides snapshots of a fascinating episode in the history of the North Atlantic world. Practitioners of amphibious warfare and students of history alike should take note. The writing is accessible and well-paced – though repetitive in patches.

Wynn's formal appendices of ship and personnel information are a valuable tool as well. In all, Wynn's readable and engaging account of his subject explores the intersections of transnational, Second World War, and special operations history. As a result, it should be of interest to a wide readership.

Tommy Jamison Monterey, California