serves as a very useful work on a critical period of the Second World War.

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Ken W. Sayers. U.S. Navy Minecraft. A History and Directory from World War I to Today. Jefferson, NC: McFarland, www.mcfarlandbooks.com, 2023. 499 pp., illustrations, glossary, notes, tables, bibliography, index. US \$55.00, paper; ISBN 978-1-4766-8202-0. (E-book available.)

While used in every major conflict in the twentieth century, naval mining operations and de-mining operations does not get a great deal of press. Sown as area denial weapons to restrict access to waters and to prevent hostile naval forces from being able to use critical stretches of oceans, the mine was a powerful tool utilized by many nations. It helped shape naval operations and as such played a critical role in understanding the development of the battle space. In the First World War naval mines were used to restrict access to the North Sea and to provide a major barrier to German U-boats and surface forces. During the Second World War naval mines were used by the Japanese in much the same fashion to protect key shipping lanes. Every amphibious assault, no matter where it happened, was always preceded by mine-clearing ships to sweep the approaches to the beaches so landing craft could come in with one less risk. The first shots fired on D-Day were related to those operations as minesweepers were the first ships to close the beach.

To say that mine laying and sweeping are clearly a serious issue in naval planning is an understatement. A significant investment in resources by all sides was put into the use of or removal of mines. Yet the very limited material on the subject is a serious gap in the literature.

Ken W. Sayers, a former American naval officer who served both in the Pacific Fleet destroyers and at the Pentagon, brings a lifetime naval knowledge and experience to bear on the subject. His book on *U.S. Navy Minecraft* represents a unique study of this little-discussed subject, and a promise to help our understanding. Nearly 500 pages of text are broken up into 28 chapters supported by a preface, introduction, and detailed glossary of terms and abbreviations. The introduction offers a brief summary of the evolution of mines and their use, providing the only contextual understanding in this book in this book of the history of minelaying. Explaining its evolution and how ships were initially adapted to the job, Sayers provides an interesting thumbnail description of the use of mines.

Each chapter is organized in the same way and describes a specific class of ship. A detailed directory examines every class of ship either adapted or

built for US Navy operations. A short description of the class, the number of vessels produced or brought into service, and where they were assigned to serve serves as a quick precis at the start of every chapter. There follows a detailed list of all the ships in that class, indicating their service and what happened to them. Sayer uses a series of codes to go with the ship names/ numbers so that the reader can quickly identify them. For example, chapter one discusses the Second World War Auxiliary Minelayer (ACM). The first ship in the class, ACM 1, the USS Chimo, was transferred to the US War Shipping Administration after the war before being sold to a civilian agency and eventually sinking.(34) After this information are the specifications of the ships giving size, engine types and power, armament, and of course crew complement. The rest of the chapter provides summary histories of some of the individual ships, such as the watershed moments for the ship, date laid down, who built it, etc. With each chapter focusing on a different class of ship, the result is an incredible compilation of minelayers and sweepers that at times is almost dizzying due to the huge volume of material and speed with which the author goes through them.

Of particular interest is the inclusion of the Minelaying Submarine, chapter 25. The USS *Argonaut* was the only American submarine built from the keel up to lay mines. While a unique boat with important capabilities, it was not the only American submarine capable of laying mines, just the only one expressly built for the job. Sayers notes that other boats laid mines in the Pacific, mainly due to a shortage of torpedoes, but the focus is on the *Argonaut*. That is unfortunate as minelaying for submarines is a very difficult and dangerous mission and more information here would be greatly appreciated.

The huge directory of ships is both the greatest strength and weakness of the book. The staggering amount of minecraft research makes the book an outstanding reference when details and information are required, much like several other books focused on the American Navy and construction. So much material presented in such a dense configuration, however, can literally overwhelm the reader. It is easy to get lost in such a wealth of information.

What is most disappointing is the lack of a fuller explanation of minelaying and sweeping. Yes, the introduction talks about the history of minelaying, but it is a very small thumbnail discussion of a complex set of issues. As it is, before picking up the book, readers really need to understand minelaying and minesweeping, the types of mines used and of course the peculiar challenges that each presents for minesweeping. Without that knowledge, the text simply becomes a list of ships and technical specifications which is interesting but of limited value except to specialists. As a text it does not really advance our understanding of the use of mines or how they were countered.

This is really a niche book. Those with knowledge or experience in this

unique area of naval history will get a great deal from the text while general readers will likely struggle. If used in conjunction with books explaining minelaying/sweeping as a process and their tactical advantages, the text would really come to life. Anyone working in this particular area of naval history will find *Minecraft* enormously valuable. Laymen, general readers, or even a student of naval history will find it less so. I enjoyed the book but would not recommend it to armchair historians unless they are able to fill in the blanks.

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Alessio Sgarlato and Nico Sgarlato. *Secret Projects of the Kriegsmarine: Unseen Designs of Nazi Germany's Navy.* Barnsley, S. Yorks: Greenhill Books, www.greenhillbooks.com, 2022. 216 pp., illustrations, tables, bibliography. UK £20.00, hardback; ISBN 978-1-78438-687-0. (E-book available.)

Without any doubt there is a certain fascination in the development of experimental and advanced weapons developed by Nazi-Germany during the Second World War and a market for nearly every book dealing with this subject. Nevertheless, the topic is a highly problematic one as any serious historical analysis of the subject also requires an in-depth analysis of how the development of these weapons was connected to the Nazi regime and to forced labour, the concentration camp system and many other subjects that tend to be avoided when focusing on the advanced weapons technology of Nazi-Germany.

Secret Projects of the Kriegsmarine, originally published in Italian and now available in English, unfortunately tries to isolate the development of advanced naval weapons and designs as a purely technological subject, without putting these developments into context and without providing the full background for how and why these weapons were developed. As such, it caters to an audience that still subscribes to the idea of technology being somewhat independent from the regime that provided the opportunity for such developments and fails to recognize the collaboration between technology and a system that was responsible for millions of deaths during the Second World War and the holocaust.

Divided into five parts (secret underwater weapons, piloted torpedoes and midget submarines, major surface vessels, smaller surface vessels, landing wonder weapons) the book claims to provide a comprehensive overview of advanced naval technology developed by the Kriegsmarine during the war