

**Gerry Doyle and Blake Herzinger. *Carrier Killer: China's Anti-Ship Ballistic Missiles and Theater of Operations in the early 21st Century*. Warwick, UK: Helion, [www.helion.co.uk](http://www.helion.co.uk), 2022. 70 pp., illustrations, maps. UK £19.95, US \$29.95, CAN \$41.95 paper, ISBN 978-19150-7064-7.**

In the early dawn of 26 January 1929, USS *Saratoga* launched nearly every aircraft on its deck toward the Panama Canal. By 0700, the naval air strike achieved complete surprise, the exercise umpires of Fleet Problem IX ruling that bombers attacking the canal's locks had rendered the canal inoperable and the mission a success. As the aircraft completed their mission, however, the battleships of the "Blue Force" discovered *Saratoga* almost 150 miles away, as they swept the Gulf of Panama. In the ensuing mock engagement, as the battleships opened fire and a Blue Force submarine fired a full spread of torpedoes, the umpires ruled *Saratoga* sunk before the airwing had returned from their mission over the canal. The mixed results of Fleet Problem IX, where the Black Force conducted a long-range air strike and successfully completed their mission of closing the Panama Canal while the Blue Force succeeded in sinking their enemy's aircraft carrier, opened a debate that has ebbed and flowed for nearly a century. How does the vulnerability of the aircraft carrier affect the way a navy thinks about its fleet? Gerry Doyle and Blake Herzinger's *Carrier Killer: China's Anti-Ship Ballistic Missiles and Theater of Operations in the early 21st Century* brings that debate into the twenty-first century with clear analysis, excellent illustrations, and a succinct look at how the People's Republic of China (PRC) intends to place American carrier vulnerability at the center of its maritime planning.

Gerry Doyle is a writer and editor with Thomson Reuters, working in the Indo-Pacific region, who has covered politics and international affairs from the streets of Chicago to the Arab Spring. Blake Herzinger is a naval reserve officer who has spent most of his career in the Pacific and works as a consultant to the US Navy and Indo-Pacific Command out of Singapore. Together, they bring not only years of experience analyzing the Pacific world, but also a keen awareness of the complexity of both the military and political dynamics of the US Navy's growing concerns over the rise of the People's Republic of China. Over the course of six short chapters, *Carrier Killer* examines the history, technology, strategy, political symbolism and messaging, and tactics involved in the PRC's development of anti-ship ballistic missiles. Detailed and well researched open-access information on the DF-21 and DF-26 missile systems is at the core of the text, with the authors offering honest assessments of where the unclassified information may be flimsy or incomplete. They conclude the book with a thoughtful chapter entitled "Where do we go from here?" and a conclusion which brings together the key insights of the previous chapters and

demonstrates what is known as well as the significant number of unknowns involved in the Chinese missiles.

The first key takeaway from this book, that informs how today's naval professionals and students of the Pacific world should think about the PRC threat to American naval forces, is that the "kill chain" for these weapons is incredibly complicated, and by no means assured. "Kill chain" is a military term of art used to describe the sequences of events needed to achieve a successful engagement using today's networked, precision, long-range weapons. A potential target must be found via reconnaissance and intelligence gathering, the track of that target must be maintained, the information must successfully be passed from the intelligence gathering organization to a targeting staff, that staff must appropriately plan the attack, that plan must then be passed to the unit responsible for launching the weapon, then the weapon must be launched safely and successfully, and then all the technological elements of the weapons must operate or deploy successfully all the way until final impact. Each step in the chain must work nearly flawlessly for a successful engagement. And each step in the chain has the possibility of being interrupted by the enemy. As Doyle and Herzinger point out, this is a very complex undertaking and is quite difficult. And that does not even include questions about the technological elements of the DF-21 and DF-26 missiles and the fact that the PRC has not successfully tested them against moving targets at sea. These weapons are anything but a silver bullet.

The second key insight from the authors' analysis is that the ability of the newer, longer-range DF-26 to strike every American base between Guam and the Chinese mainland creates a much bigger threat than the possibility of a DF-26 attempting to strike an American aircraft carrier at sea. Targeting American and allied Pacific bases is a far less complex problem than managing the kill chain for an open-ocean engagement with a moving carrier. American and allied Pacific basing creates a logistical and capability infrastructure that would be vital in any future conflict with China. The DF-21 and DF-26 missiles, which are capable of carrying anti-ship warheads, might just as easily be fitted with conventional or nuclear warheads. The authors argue that this threat, to the allied basing network spread across the Indo-Pacific, is far greater than the high-profile and more often discussed threat to aircraft carriers which causes naval hand-wringing.

The final important conclusion of the authors in *Carrier Killer* is that the balance between the offense and defense fluctuates constantly. With this observation, the authors channel their inner historian, despite being analysts of the contemporary world. As naval historians have known for centuries, changing technology and changing tactics result in operational and strategic rebalancing in how and why naval forces fight. This results in adjustments to

the relative dominance of the offense and defense. If modern analysts are to be believed, and technological change is faster now than it has ever been in the past, that rebalancing might create rapid changes in the military dynamics of the Indo-Pacific and affect defenses against the threat of the missiles.

Doyle and Herzinger's *Carrier Killer* offers a thoughtful, thorough, and clear-eyed analysis of the possibilities created by China's deployment of anti-ship ballistic missiles. Rather than "silver bullet" weapons that change the balance of power in the Pacific, the authors demonstrate that these weapons are complex and unproven. At the same time, they certainly represent a threat to the safety of American aircraft carriers and the power projection mindset of American naval thinking. The vulnerability of the carriers has been a subject of debate for almost a hundred years. The authors do an excellent job of placing these new weapons in their technological, military, diplomatic, and informational context, backed up with excellent illustrations, maps and historical background. As a quick primer on important developments in the Pacific world, *Carrier Killer* offers naval professionals, contemporary analysts, historians, and students a valuable resource to help them understand the complexity of today's Sino-American naval competition.

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**Steve R. Dunn. *Battle in the Baltic: The Royal Navy and the Fight to Save Estonia & Latvia 1918-20*. Barnsley, S. Yorks.: Seaforth Publishing, [www.seaforthpublishing.com](http://www.seaforthpublishing.com) (distributed by Naval Institute Press), 2021. 304 pp., maps, illustrations, appendices, notes, bibliography, index US \$24.95, UK £12.99, paper; ISBN 978-1-3990-9655-3. (E-book available.)**

In the years immediately following the First World War, the Royal Navy engaged in an undeclared war by undertaking defensive and offensive operations in the eastern end of the Baltic Sea against the Bolsheviks and German elements trying to prevent the emergence of new nationalist states seeking independence. Commitment to the enterprise within higher Allied councils and Britain's Lloyd George government was tepid at best, save the constant urgings of munitions, war, and air minister, Winston Churchill. Lack of clear political direction meant goals were left ill-defined, and naval officers commanding the squadrons, such as admirals Edwyn Alexander-Sinclair and Walter Cowan, creatively interpreted the instructions given. Royal Navy warships brought arms and ammunition for the hard-pressed nationalist forces, provided bombardment and fire-support when necessary, patrolled in the face of significant dangers from mines and adversarial naval forces, and launched